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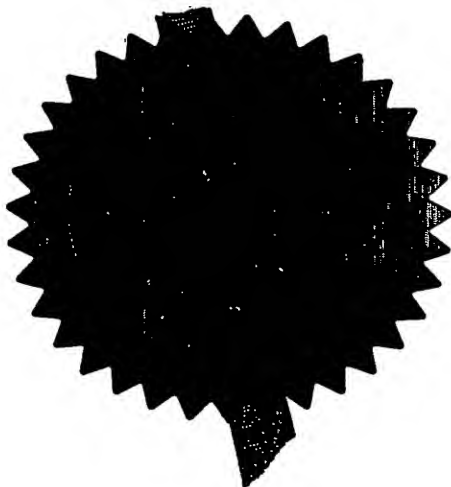The Patent Office
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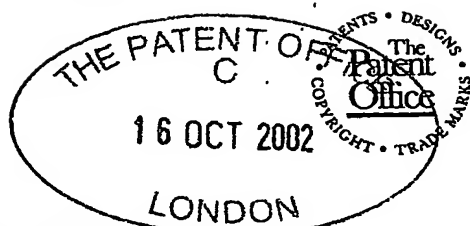
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ISIS INNOVATION LIMITED
Ewert House, Ewert Place
Summertown, Oxford OX2 7SG
United Kingdom

Patents ADP number *(if you know it)* 03998564003

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4. Title of the invention

INHIBITORS

5. Name of your agent *(if you have one)*

J.A. KEMP & CO.

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14 South Square
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WC1R 5JJ

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INHIBITORS

Field of Invention

The present invention relates to methods of designing inhibitors of FIH using
5   the crystal structure of FIH, and to inhibitors of FIH and their use in the treatment of
ischaemia.

Background of the Invention

In cells of many organisms exposure to an environment in which oxygen is
10   depleted relative to optimal levels induces a hypoxic response. In these hypoxic
cells, activation of a transcriptional cascade involving hypoxia inducible factor (HIF)
directs a series of adaptive responses that enhance oxygen delivery or limit oxygen
demand. Activation of HIF in cancer and ischaemic hypoxic vascular diseases has
revealed its important role in human pathology and demonstrated that manipulation
15   of HIF activity has important therapeutic potential.

The HIF transcriptional complex comprises an $\alpha\beta$ heterodimer, HIF-β being a
constitutive nuclear protein that dimerises with oxygen regulated HIF-α subunits
(Semenza, G. L. (2000) *Genes Dev.* **14**, 19831991). The activity of HIF-α, is
suppressed by oxygen-dependent modification catalysed by a series of $Fe^{(II)}$ and 2OG
20   dependent dioxygenases that hydroxylate specific HIF-α residues. In the presence of
oxygen in human HIF-1α, 4-hydroxylation of Pro402 or Pro564 by a set of HIF
prolyl hydroxylase isozymes (PHD1-3) (Epstein et al. (2001) *Cell* **107**, 4354; Bruick,
R. K., and McKnight, S. L. (2001) *Science* **294**, 13371340) mediates its recognition
by the von Hippel-Lindau (VHL) ubiquitin ligase complex and consequent targeting
25   for proteasomal destruction (Ivan et al, (2001) *Science* **292**, 464468; Jaakkola et al
(2001) *Science* **292**, 468472, WO 02/074981). In a complementary mechanism FIH
catalyses β-hydroxylation of HIF-1α Asn803 (Lando et al, (2002) *Science* **295**,
858861) blocking interaction with the transcriptional co-activator p300 (Dames et al.,
(2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 52715276; Freedman et al, (2002) *Proc.*
30   *Natl. Acad. Sci. U. S. A.* **99**, 53675372). In hypoxia, limitation of enzymatic activity.
allows HIF-α to escape destruction and become transcriptionally active.

Inhibition of HIF hydroxylases strongly activates the HIF transcriptional cascade even in the presence of oxygen (Epstein et al.(2001) *Cell* 107, 4354). Thus, inhibition of the HIF hydroxylases results in a pro-angiogenetic response that may be used in the treatment of cardiovascular diseases/ ischaemic hypoxic vascular diseases including myocardial infarction and anaemia. A problem with this approach is that the human cells contain other enzymes belonging to the same family as the HIF hydroxylases, i.e. utilising dioxygen (a cosubstrate), 2-oxoglutarate (2OG) (a cosubstrate) and Fe(II) (a cofactor). Such enzymes are exemplified by phytanoyl coenzyme A hydroxylase, procollagen prolyl-4-hydroxylase, procollagen prolyl-3-hydroxylase, gamma-butyrobetaine hydroxylase, Alk B (a DNA repair enzyme) and others including predicted 2OG oxygenases identified on the basis of sequence analyses including a sub-family related to FIH (Hewitson et al., J BIOL CHEM 277 (29): 26351-26355, 2002). It is generally agreed that it is desirable that enzyme inhibitors used as pharmaceuticals are selective for their intended target or the targets involved in producing the desired effect. A lack of selectivity can lead to toxic side effects that render particular compounds unsuitable for use in human or animal therapy. One approach to identifying compounds that are selective for the intended target is to undertake structural, mechanistic and other analyses on the intended agents and to use the information gained to aid in the preparation of selective compounds, or more selective compounds (relative to those previously known), for use as pharmaceuticals for use in humans or animals. Here we describe structural and other studies on the HIF hydroxylases that enable the design of selective inhibitors of FIH and related enzymes.

Summary of the Invention

The present inventors have now identified the site of hydroxylation of asparagine 803 of HIF-1α by FIH. In addition, the inventors have obtained the crystal structure for FIH including identification of the binding site and residues involved in the interaction of FIH with HIF.

Accordingly, the present invention provides a method of identifying, screening, characterising or designing a chemical entity which mimics or binds to FIH, which method comprises comparing a structural model of FIH with a structural

model for said chemical entity, wherein said structural model of FIH is derived from structural factors or structural coordinates determined by subjecting to X-ray diffraction measurements a crystal comprising FIH.

The invention also provides for:

5   -   the use of the structural co-ordinates obtainable by subjecting a crystal comprising FIH to X-ray diffraction measurements and deducing the structural co-ordinates from the diffraction measurements, to identify, screen, characterise, design or modify a chemical entity;

     -     a chemical entity identified by a method of the invention, wherein

10 said chemical entity inhibits the asparaginyl hydroxylase activity of FIH; and

     -     a chemical entity of the invention for use in a method of treatment.

Description of the Figures

Figure 1: 2OG binding site.

15 Figure 2: binding of Asn-803.

Figure 3: conformation of CAD at site 1; and

Figure 4: conformation of CAD at site 2.

Detailed Description of the Invention

20   The present inventors have identified the position of asparagine 803 that is hydroxylated by FIH. In addition, the inventors have identified the crystal structure of FIH. This structure therefore allows for identification of the amino acid residues involved in binding of FIH to HIF.

The identification of the interaction and the structures allows for the

25 characterisation or identification of chemical entities which can bind and in particular which can inhibit FIH. A number of different types of inhibitors can be identified as discussed in more detail below.

The inventors have successfully crystallised human FIH. This the first crystallisation of FIH and has enabled determination of the crystal structure. Co-

30 ordinates from the crystal analysis are set out in Table 3 below. The studies have allowed analysis of the binding of asparagine-803 of HIF and analysis of the conformation of the c-terminal activation domain (CAD) of HIF at the binding sites

to FIH. The present invention provides the use of the structural co-ordinates of FIH to identify, characterise, design or screen chemical entities. The chemical entities of interest are those which bind to FIH and in particular which inhibit the asparaginyl hydroxylase activity of FIH. In addition, chemical entities may be identified,

5   characterised or designed which are modified asparagine hydroxylases.

Typically, the structural co-ordinates used are obtainable by subjecting a crystal comprising FIH or a fragment thereof to X-ray diffraction measurements and deducing the structural co-ordinates from the diffraction measurements, to identify, screen, characterise, design or modify a chemical entity. The structural co-ordinates

10   indicate the positions of individual atoms within the crystal and give an indication of the space available for adjusting the position of individual atoms when designing a chemical entity.

The crystal subjected to X-ray diffraction methods comprises FIH or a fragment thereof. The FIH may be from any source but is preferably human FIH. The

15   FIH may be a modified form. For example, the FIH may be modified by insertion, deletion, n-terminal or C-terminal addition, or substitution of amino acid by another amino acid. Amino acid substitutions may be conservative substitutions. Typically, when crystallised, a FIH mutant will adopt a similar 3-dimensional structure to that adopted by the corresponding FIH. A mutant may be an inactive FIH.

20   References to FIH herein refer to FIH and homologues thereof. Amino acid residues are defined with reference to the position in FIH (see e.g. Hewitson et al). The relevant amino acid residues of homologues of FIH are the equivalent amino acid residues, based on for example the best alignment of homologue to FIH.

A FIH may be isolated by any suitable means for use in crystallisation

25   studies. For example, a FIH may be purified using biochemical means from a suitable source. Typically, however, it will convenient to over express FIH in cells and purify FIH from those cells. Thus, a polynucleotide encoding a FIH may be used in the construction of a vector. The FIH may be crystallised according to any method known to those skilled in the art. X-ray diffraction may be carried according

30   to any suitable method. The data collected from X-ray diffraction experiments may be processed to deduce the structural co-ordinates of FIH using any suitable method.

The invention provides the use of structural co-ordinates to identify, characterise, design or screen a chemical entity. The chemical entity may be one which binds to FIH, or which acts as an inhibitor of asparaginyl hydroxylase activity. Alternatively, the chemical entity may be a modified FIH to alter the activity of a

5   FIH.

A chemical entity which binds to or inhibits FIH is any chemical entity capable of forming an association with the FIH. The binding or inhibition may be non-specific, for example, such an entity may also bind to or inhibit other 2OG oxygenases. Alternatively, an agent may be designed or identified which specifically

10   binds to or inhibits asparaginyl hydroxylases. An agent may be designed or identified which is a specific inhibitor of FIH, but not other asparaginyl hydroxylases.

The structural co-ordinates of FIH allows a skilled person to predict which amino acids are important in active site formation and which amino acids are important in contacting the substrate. The substrate binding site may be shown as a 2

15   dimensional representation or a 3 dimensional representation produced by physical models or displayed on a computer screen. Such representations can be used to design, identify or screen chemical entities which bind to or inhibit or are predicted to bind to or inhibit FIH. Such representations can also be used to identify modifications of FIH to alter its activity characteristics.

20   Examples of modifications to FIH include modifications to increase the binding of FIH for its substrate, or to alter the substrate the specificity. Alternative modifications include those which alter the activity of FIH, for example, to remove asparaginyl hydroxylase activity.

The representations of the structures may be used in other ways. For

25   example, the representations of the FIH active site may be used to model constraints by the putative introduction of covalent bonds between the atoms which come close together when FIH binds to a substrate. Representation of the active site may be used to predict which residues of FIH are likely to be involved in steric hindrance. Such residues may be modified, replaced or deleted to decrease esoteric hindrance in

30   order to increase avidity of the peptide for its substrates.

In general, it will be necessary to process the structural co-ordinates obtainable according to the invention in computer-based methods in order to identify

or design chemical entities with the desired molecular structure or to identify chemical entities whose structure is complementary to all or part of another chemical entity of interest. Thus, chemical entities which have a structure similar to FIH may be identified or designed. Chemical entities which bind to FIH may be identified or

5 designed. Preferably, such chemical entities bind at the active site of FIH and in general may act as inhibitors of asparaginyl hydroxylase activity.

Such computer-based methods fall into two broad classes: database methods and *de novo* designed methods. In database methods, the chemical entity of interest is compared to all chemical entities present in a database of chemical structures and

10 chemical identities whose structure is in some way similar to the compound of interest identified. The structures in the database are based either on experimental data, generated by NMR or X-ray crystallography, or models of 3 dimensional structures based on 2 dimensional data. In *de novo* design methods, models of chemical entities, for example such are those which might bind to FIH are generated

15 by a computer program using information derived from known structures and/or theoretical rules.

Similarly, the FIH structural coordinates may be used to screen for the expected activity of chemical entities selected, designed or shown to be modulators such as inhibitors of other hydroxylases, for example prolyl hydroxylases. For

20 example the compounds may be screened to assess the likelihood of a prolyl hydroxylase inhibitor additionally inhibiting FIH hydroxylase. Such screening methods may be useful in identifying agents which selectively inhibit HIF prolyl hydroxylase, but not HIF asparaginyl hydroxylase.

Chemical entities designed or selected according to the methods of the

25 invention may be tested and optimised using computational or experimental evaluation. Experimental methods to assay for the activity of asparaginyl hydroxylase are described in more detail below.

Based on the structure of FIH, a number of different types of inhibitors can be identified. These inhibitors are discussed in more detail below.

30

Dimerisation inhibitors

The crystallographic asymmetric unit contains one FIH molecule. However, analysis of crystallographic symmetry revealed a dimeric form of FIH, consistent with native gel-electrophoresis analysis. The dimer interface involves the two C-terminal helices of each molecule in an interlocking arrangement predominantly

5   involving hydrophobic interactions. This unusual interface buries a surface area of 3210 Å^2, large on average by comparison to other dimeric proteins of this size. Inhibitors of dimerisation include those that bind to residues that form the dimerisation interface including residues selected from 330-346, such as Leu-340 and Ile-344. Inhibitors include peptides or peptide mimetics that correspond to all or

10   part of the FIH residues involved in the dimerisation interface.

For example, such inhibitors may comprise a fragment of FIH, for example, including the residues from 340 to 344, preferably, including residues 330 to 346. Such a fragment may typically have 6 or 10 amino acids in length, preferably, up to 15 or 20 amino acids in length. Alternatively, peptide homologues may be used, for

15   example, which comprise a homologue to the residues of 340 to 344 or 330 to 336, including 1, 2 or more substitutions. Additional agents include peptides or peptide mimetics which can be designed based on the crystal structure to interfere with dimerisation.

20   <u>Inhibitors exploiting metal binding in FIH:</u>

The structural work·defines the presence of Fe(II) at the active site of FIH and by implication related HIF hydroxylases. The iron is bound in an almost octahedral manner by the side chains of His199, Asp201 and His279, the 2-oxo and 1-carboxylate groups of 2OG. In the enzyme-substrate complexes there is a vacant

25   position opposite His279 revealing that the enzyme is primed for dioxygen binding. Accommodation of a ligand opposite His279 may require disruption of the hydrogen bond between Asp201 and CAD Asn803 (the iron and Asn803 β-carbon are only ~4.9 Å apart). Subsequent decarboxylation of 2OG presumably yields an iron-oxo species $[Fe^{(IV)}=O <-> Fe^{(III)}-O \cdot]$ that effects oxidation at the carbon of Asn-803 in the

30   C-terminal transactivation domain (CAD) of HIF.

Compounds that contain functional groups that bind to iron are useful as inhibitors of FIH. Examples of such compounds include thiols, alcohols, phenols, carbohydrates, hydroxamates, imidazoles and other heterocycles.

$Zn^{(II)}$ binds to FIH in an identical manner to $Fe^{(II)}$ (structure 3), consistent with

5   the metal-mediated hypoxic effect being due to displacement of $Fe^{(II)}$ from the active site of HIF hydroxylases. Since neither Zn(II) nor other metal inhibitors of FIH can replace Fe(II) as a cofactor in catalysis, compounds that preferentially promote the binding of a metal other than iron [such as Zn(II)] at the active site of FIH act as inhibitors.

10   A further class of inhibitor are non-metallic inhibitors that operate via competing with Fe(II) for binding at the active site. Such inhibitors may bind to any or all of the triad of residues (His-199, Asp-201, His-279), that bind the Fe(II) at the active site of catalytically active FIH.

15   <u>Inhibitors exploiting the 2OG binding sites</u>

The FIH:CAD structures with NOG reveal that like 2OG it is ligated to iron in a bidentate manner and imply it is an inhibitor due to decreased susceptibility to attack by an iron bound (su)peroxide intermediate or by hindering binding of dioxygen to the metal.

20   The structural studies on FIH reveal the binding interactions for the 2OG and NOG. The 5-carboxylate of 2OG (and the equivalent carboxylate of NOG) forms hydrogen bonds with the side-chains of Lys214, Thr196 and Tyr145; such interactions are unprecedented in other structures of 2OG oxygenases. FIH is further unusual in that Lys214 is on the fourth DSBH β-strand whereas previously assigned

25   basic 2OG-5-carboxylate binding residues are at the beginning of the eighth DSBH strand.

The structural studies reveal the FIH residues that form the pocket into which 2OG and NOG bind. In addition to the aforementioned these include the side-chains of Ile-281, Leu-186, Leu-188, Phe-207, Thr-196. Knowledge of these interactions

30   enables the design of improved (as measured by binding parameters) and selective inhibitors. Thus, for example an inhibitor binding in the 2OG binding pocket may form hydrophobic interactions with any or all of the side chains of Ile-281, Leu-186

Leu-188, Phe-207, Thr-196. Further it may form electrostatic or hydrogen bonding interactions with the residues involved in binding the 5-carboxylate of 2OG (Lys214, Thr196 and Tyr145).

5 <u>Inhibitors exploiting the peptide substrate binding site</u>
<u>There are two binding sites</u>

The ES complex structures unexpectedly reveal two separate binding sites involving $CAD_{795-806}$ (i.e residues 795-806 of the C-terminal transactivation domain of HIF) (Site 1) and $CAD_{813-822}$ of HIF (Site 2) with contact surface areas of 1640 $Å^2$
10 and 1080 $Å^2$, respectively . CAD residues in these regions are conserved in all known HIF-1α and HIF-2α sequences. The electron density for site 1 was of good quality, with only the side-chain of Tyr798 poorly defined, while that for site 2 was at a lower level and quality, probably reflecting weaker binding at this site. $CAD_{804-806}$ and presumably also $CAD_{807-811}$, for which density was not observed, do not form
15 direct interactions with FIH. Kinetic analyses employed to investigate the relative importance of Sites 1 and 2, revealed that fragments containing site 1 only are hydroxylated by FIH but less efficiently than those containing both sites demonstrating that both are important in binding and that both may be exploited in inhibition studies.
20 At Site 1 $CAD_{795-803}$ are bound in a groove and adopt a largely extended conformation linked to FIH by ten hydrogen bonds. Asn803 of CAD is strikingly buried at the active and directly adjacent to the $Fe^{(II)}$. CAD Asn803 and Ala804 form a tight turn, stabilised by a hydrogen bond between the backbone carbonyl of Val802 and NH of Ala804, which projects the side chain of Asn803 towards the $Fe^{(II)}$. The
25 side chain of CAD Asn803 is precisely orientated by three hydrogen bonds to enable hydroxylation at the *pro-S* position of the β-carbon consistent with the NMR assignments (see above) The primary amide of CAD Asn803 is sandwiched between FIH residue Tyr102 and the $Fe^{(II)}$, and forms hydrogen bonds with the side chains of FIH residues Gln239 and Arg238 , residues located on the insert to the DSBH motif.
30 Significantly, the substrate and $Fe^{(II)}$ binding sites are directly linked since the backbone nitrogen of CAD Asn803 also forms a hydrogen bond (~3 Å) with the

carboxylate oxygen of Asp201 that is not complexed to the iron. Six additional hydrogen bonds stabilise the binding of FIH to $CAD_{795-801}$.

In contrast with Site 1, Site 2 is located on the FIH surface and involves only two hydrogen bonds. $CAD_{816-823}$ of Site 2 form an α-helix, in exact agreement with
5   the structure of this region in complex with CBP/p300 (Dames et al., (2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 52715276; Freedman et al, (2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 53675372). As in that complex, the highly conserved Leu818, Leu819 and Leu822 sit in a hydrophobic pocket on the surface of FIH and form the basis of the binding interaction and so it is not possible for these residues to bind
10   simultaneously to CBP/p300 and FIH.

The extended loop conformation adopted by the CAD residues at Site 1, contrasts with the α-helical conformation adopted by the same residues when complexed with the 1st transcriptional adaptor zinc-binding domain (TAZ1) of CBP/p300(Dames et al.,(2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 52715276;
15   Freedman et al, (2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 53675372). The disordered structure observed for the CAD, and other HIF-α residues, when free in solution may thus reflect a requirement to adopt more than one conformation for complex formation with different proteins.

The changes in the conformation of CAD on binding are complemented by
20   changes in FIH revealing an induced fit binding process; Trp296 of FIH undergoes a 50° rotation about $C_{beta}-C_{alpha}$ to accommodate CAD Val802, while both Tyr102 and Tyr103 become more ordered. Further evidence of induced fit comes from the significant differences in resolution between the structures obtained with and without CAD fragments bound reflecting ordering of FIH that occurs on binding (structure 4,
25   for comparison, represents FIH complexed with $Fe^{(II)}$ and 2OG alone). Interference in the conformational changes involved in the hypoxic response, in particular those involving the CAD region, e.g. by use of small molecules or by gene or protein therapy, may allow manipulation of the hypoxic response to enable pro or anti-angiogenetic responses.
30   Thus, the structural studies define the (i) FIH residues involved in binding the CAD of HIF (ii) conformation of FIH when CAD is bound and (iii) conformation of CAD when bound to FIH. These results are useful in the design of selective

inhibitors of FIH and related enzymes. Features of the FIH binding Sites may be used to mediate tighter binding of inhibitors to FIH or to obtain inhibitors that do not bind tightly to FIH, i.e. avoid inhibition of FIH.

Inhibitors binding at or close to the Site 1 may exploit electrostatic, hydrogen binding and/or hydrophobic interactions with Tyr-102, Asp-104, Lys-106, Asp-201, Glu-202, Gln-147, Gln-239, residues 299-303, His-313, Ala-317, Ile-318, Asn-321, Lys-324, Arg-238, Trp-296, Asn-321- Lys-324. Inhibitors binding at Site 1 may mimic or partially mimic the turn conformation adopted by CAD when bound at Site 1.

Inhibitors binding at or close to Site 2 may exploit electrostatic, hydrogen binding and/or hydrophobic interactions with residues Thr-149, Leu-150, Asn- 151, Asp-152 and residues Val-159, Phe-162, Leu-163, Trp-167, Gln-181, Leu-182, Thr-183, Ser- 184, Asn- 185. Inhibitors binding at Site 2 may mimic or partially mimic the helical conformation adopted by CAD when bound at Site 2.

It is recognised that inhibitors need not bind to both Sites 1 and 2, although that they may, and that Site 1 is preferred over Site 2.

Residues 801 – 805 of CAD that bind at Site 1, and in particular residues 802-805 form a turn conformation in which the distance of the backbone C=O of 802 to the backbone NH of 804 is ca. 2.8 Å. Including the H-bond formed between the NH of Ala-804 and the carbonyl O of Val-802 of the HIF-1alpha CAD, the turn contains 7 atoms in a pseudo-ring.

Turns are especially amenable to mimicry by analogues useful for enzyme inhibition or receptor binding.

Examples of turn mimics and their modifications can be found in the following reviews: Hanessian et al, TETRAHEDRON 53: 12789-12854 SEP 22 1997; Gillespie et al, BIOPOLYMERS 43: 191-217 1997; and Burgess et al., ACCOUNTS CHEM RES 34: 826-835 2001). Recent examples of primary reports on turns include the following (and references therein) Maier et al, EUR J ORG CHEM: 2686-2689, 2002; Reid et al, J AM CHEM SOC 124: 5673-5683, 2002; Mahadevan et al, J BIOMOL STRUCT DYN 19: 775-788 2002; Eguchi et al, J MED CHEM 45: 1395-1398 2002; De Borggraeve et al, TETRAHEDRON LETTERS 42: 5693-5695 2001; Kohn et al, TETRAHEDRON LETT 42: 4453-

4457 2001; Eguchi et al, TETRAHEDRON LETT 42: 1237-1239 2001; Manzoni et al, TETRAHEDRON 57: 249-255 2001; Jiang et al., HELV CHIM ACTA 83: 3097-3112 2000; Derrer et al, J CHEM SOC PERK T 1: 2957-2967 2000; Belvisi et al, EUR J ORG CHEM: 2563-2569 2000; Claridge et al, BIOORG MED CHEM LETT 6: 485-490 1996.

Inhibitors employing a combination of binding sites

It is well known that enzyme inhibitors competing for binding at more than one substrate or cosubstrate binding site, sometimes termed bisubstrate inhibitors, can be useful. Examples can be found in Wang et al, BIOCHEMISTRY-US: 15676-15683 2001; and Lerner et al, ANGEW CHEM INT EDIT 40, 4040-4041, 2001.

In the case of FIH and other 2OG oxygenases bisubtrate inhibitors may be useful since features of 2OG binding may be present in more than one enzyme whereas the CAD substrate is unique. Thus, inhibitors that bind to both binding sites may show improved selectivity over those that bind to the 2OG binding site only. The structural analyses enable the identification of such bisubtrate inhibitors. The 2OG and CAD binding sites are linked to each other via a 'channel' extending from the 2-oxo group of 2OG (or NOG) to the beta-carbon Asn-803 in the FIH.Fe.2OG/NOG.HIF(CAD) complexes. In the structures this 'channel' either appears empty but may be occupied by water molecules. The distance from the C of the 2-oxo group of 2OG to the beta-C of Asn-803 is ca. 6 Å. The distance from the 3-C of 2OG to the beta-C of Asn-803 is ca. 6.6 Å. The information from the structural analyses enables the identification of bisubstrate inhibitors.

Inhibitors that bind to the 2OG binding site or part thereof and the peptide substrate

Another class of inhibitors bind to the enzyme-substrate complex, i.e. to FIH.Fe(II).HIF(CAD). The structural analyses enable the identification of such inhibitors. As described above 2OG and CAD binding sites are linked to each other via a 'channel' extending from the 2-oxo group of 2OG (or NOG) to the beta-carbon of Asn-803 in the FIH.Fe.2OG/NOG.HIF(CAD) complexes.

Mechanism based inhibitors

Another class of inhibitors is based upon substrate analogues that can undergo part of the catalytic cycle but either stall at an intermediate stage or cause an aberrant reaction resulting in damage or inhibition. The observation that FIH catalyses

5   hydroxylation of Asn-803 at the beta-position together with the structural analyses enables the design of such inhibitors. Such compounds include analogues of the substrates (inhibitors) in which Asn-803 is replaced with an analogue which does not undergo oxidation such as beta-fluoro- asparagine, beta-di-fluoro- asparagine, beta-methyl- asparagine, beta-dimethyl- asparagine derivatives. Alternatively derivatives

10   that undergo oxidation to give an agent that can be oxidised to give an inactivating group such as an epoxide or metal chelating group may prepared (such mechanism based inhibitors are sometimes referred to as suicide inhibitors). In the case of FIH they include alpha-beta-dehydroasparagine and beta-methylene asparagine.

The crystal structure of FIH also allows identification of those residues

15   involved in asparaginyl hydroxylase activity of FIH. The crystal structures may therefore be used to design modified FIH, for example, which has reduced or no asparaginyl hydroxylase activity, for example, by mutation of critical residue within the active site. In the alternative, those residues involved in substrate binding can be identified and modified, for example, to allow the asparaginyl hydroxylase to accept

20   other substrates than HIF. For example, by enlarging or decreasing the asparagine binding pocket. Such modified asparaginyl hydroxylases can then be produced using standard techniques. The expected activity can then be assayed as described in more detail below, for example, to identify whether the hydroxylase activity with respect to HIF has been reduced or removed, or alternatively, to assess the asparaginyl

25   activity or binding in respect to other substrates.

Compounds which have been identified in accordance with the present invention can be further analysed in assays to monitor for activity of the asparagine hydroxylase enzyme directly. Agents which inhibit or reduce HIF asparagine hydroxylase activity reduce hydroxylation of HIF-α and lead to an increase in the

30   interaction with P300 and in particular the CH1 domain and thus transcriptional activation. This in turn will lead to the activation of systemic local defences against hypoxia or ischaemia that may include the promotion of angiogenesis, erythropoesis,

energy metabolism, inflammation, vasomotor function and will also affect apoptotic/proliferative responses.

We describe below in more detail a number of different assays that may be carried out to assay the activity of modulators of HIF hydroxylase activity or of

5   modified FIH identified in accordance with the present invention and in particular of asparagine hydroxylase activity, or which affect regulation of HIF-α interaction with p300 in a cell and hence which affect HIF mediated activity. Some of these assays utilise HIF polypeptides, and HIF asparagine hydroxylases. Typically, the assays may utilise a human HIF asparagine hydroxylase such as FIH or a fragment or

10   variant of a human HIF asparagine hydroxylase. These components are described in more detail below. Each of these components, where required, may be provided either in purified or unpurified form, for example, as cellular extracts or by purification of the relevant component from such extracts. Alternatively, the relevant component can be expressed using recombinant expression techniques and purified

15   for use in the assay. Alternatively, the components may be expressed recombinantly in a cell for use in cell based assays.

Typically, a polynucleotide encoding the relevant component is provided within an expression vector. Such expression vectors are routinely constructed in the art and may for example involve the use of plasmid DNA and appropriate initiators,

20   promoters, enhancers and other elements, such as for example polyadenylation signals which may be necessary and which are positioned in the correct orientation in order to allow full protein expression. Suitable vectors would be very readily apparent to those of skill in the art, such as those described in more detail herein with reference to the HIF hydroxylases. Promoter sequences may be inducible or

25   constitutive promoters depending on the selected assay format. The promoter may be tissue specific. Examples of promoters and other flanking sequences for use in the expression vectors are described in more detail herein with reference to the HIF hydroxylases of the invention and in particular to the human HIF hydroxylases.

30   HIF Polypeptides and Peptide Analogues

The assays of the present invention may use a substrate of a HIF asparagine hydroxylase and in particular an asparagine containing substrate of the enzyme. In

particular, such substrates may be used in assays to monitor for the activity of a modulator of HIF asparagine hydroxylase activity. The substrate may be a HIF polypeptide or peptide analogue thereof. Typically, a HIF polypeptide will be used as the substrate.

5   Any suitable substrate in which an asparagine residue is hydroxylated by a FIH may be used. In preferred embodiments of the invention, such a substrate is a HIF polypeptide such as a HIF-1α or HIF-2α subunit protein or fragment of either or peptide analogue of the subunit or fragment. Preferably, the HIF-α peptide conveys an oxygen regulated response. Preferably, the HIF-α peptide has a CAD domain and

10   is capable of oxygen regulated interaction with p300 and downstream transcriptional activation. Preferably, such HIF-α peptides are capable of interacting with the p300 CH1 domain. Preferably, such HIF polypeptides, fragments or peptide analogues incorporate an asparagine residue equivalent to Asn 803 defined with reference to HIF-1α. The asparagine equivalent to Asn 803 of HIF-1α may be determined by

15   aligning the HIF variant, fragment or analogue to the sequence of HIF-1α to obtain the best sequence alignment and identifying thereby the asparagine equivalent to Asn 803 of HIF-1α.

A HIF polypeptide may be of eukaryotic origin, in particular a human or other mammalian, HIF-α subunit protein or fragment thereof. Alternatively, the

20   polypeptide may be of C. elegans origin. In those assays which monitor for hydroxylation of HIF-α through its interaction with p300, the HIF polypeptide has the ability to bind to a wild type full length p300 protein or a fragment thereof comprising the CH1 domain. Preferably, such binding is able, in a hypoxic cellular environment, to activate transcription.

25   A number of HIFα subunit proteins have been cloned. These include HIF-1α, the sequence of which is available as Genbank accession number U22431, HIF-2α, available as Genbank accession number U81984 and HIF-3α, available as Genbank accession numbers AC007193 and AC079154. These are all human HIF α subunit proteins and all may be used in the invention. HIF-α subunit proteins from

30   other species, including murine HIF-1α (accession numbers AF003695, U59496 and X95580), rat HIF-1α (accession number Y09507), murine HIF-2α (accession

numbers U81983 and D89787) and murine HIF-3α (accession number AF060194) may also be used in the invention.

One HIF-α protein of particular interest is the *C.elegans* HIF-α subunit protein. The *C.elegans* system may be used in assays of the present invention.

There are a number of common structural features found in the two HIF-α subunit proteins identified to date. Some of these features are identified in O'Rourke *et al* (1999, J. Biol. Chem., <u>274</u>; 2060-2071) and may be involved in the trans-activation functions of the HIF-α subunit proteins. One or more of these common structural features are preferred features of the HIF polypeptides.

Variants of the above HIF-α subunits may be used, such as synthetic variants which have at least 45% amino acid identity to a naturally occurring HIF-α subunit (particularly to a human HIF-α subunit such as, for example HIF-1α), preferably at least 50%, 60%, 70%, 80%, 90%, 95% or 98% identity. Such variants may include substitutions or modifications as described above with respect to HIF hydroxylases. Amino acid activity may also be calculated as described above with reference to HIF hydroxylases.

HIF fragments may also include non-peptidyl functionalities and may be optimised for assay purposes such that the level of identity is lowered. Such functionalities may be covalently bound such as sugars or non-covalently bound such as metal ions.

HIFα polypeptides as described herein may be fragments of the HIF-α subunit protein or variants as described above, provided that said fragments retain the ability to interact with a wild-type p300 CH1 domain. When using proteinogenic amino acid residues, such fragments are desirably at least 20, preferably at least 40, 50, 75, 100, 200, 250 or 400 amino acids in size. Desirably, such fragments include asparagine 803.

Cell based assays of the present invention may involve upregulation of an endogenous HIF-α or expression of a HIF-α by recombinant techniques and in particular of HIF-1α.

Assay Methods

The present invention provides an assay method for an agent identified as a modulator of asparagine hydroxylation of hypoxia inducible factor. The method comprises contacting a HIF asparagine hydroxylase and a test substance in the presence of a substrate of the hydroxylase under conditions in which asparagine

5   hydroxylation occurs in the absence of the test substrate and determining asparagine hydroxylation of the substrate. In an alternative assay, HIF asparagine hydroxylase and the test substance are contacted in the presence of the substrate of the hydroxylase under conditions in which hydroxylation does not occur in the absence of the test substrate. Determination of any asparagine hydroxylation is monitored to

10   identify whether the agent actively acts as a promoter of asparagine hydroxylase.

FIH has been found to hydroxylate HIF-α at an asparagine residue within the CAD domain. This hydroxylation mediates p300 binding and in particular, reduces p300 binding. Such binding leads to transcriptional activation. This interaction and activation may also be used as the basis for an assay of the invention.

15   Such assays of the present invention may be used to assay the activity of inhibitors of HIF asparagine hydroxylase activity and are thus preferably carried out under conditions under which asparagine hydroxylation would take place in the absence of the test substance. The assays of the invention may also be used to assay the activity of inhibitors which are specific for HIF asparagine hydroxylases and

20   which do not have activity or are less active with other hydroxylases, for example, such as HIF prolyl hydroxylases or other asparagine/aspartamic acid hydroxylases. The assays of the invention may also be used to assay the activity of hydroxylase modulators, such as HIF prolyl hydroxylase inhibitors which are not expected to have activity on FIH based on structural modelling studies, and hence may be used to

25   identify inhibitors which are specific for prolyl hydroxylase.

Methods for monitoring modulation

The precise format of any of the screening or assay methods of the present invention may be varied by those of skill in the art using routine skill and knowledge.

30   The skilled person is well aware of the need to additionally employ appropriate controlled experiments. The assays of the present invention may involve monitoring for asparagine hydroxylation of a suitable substrate, monitoring for the utilisation of

substrates and co-substrates, monitoring for the production of the expected products between the enzyme and its substrate. Assay methods of the present invention may also involve screening for the direct interaction between components in the system. Alternatively, assays may be carried out which monitor for downstream effects such

5   as binding of HIF by p300 and downstream effects mediated by HIF such as HIF mediated transcription using suitable reporter constructs or by monitoring for the upregulation of genes or alterations in the expression patterns of genes know to be regulated directly or indirectly by HIF.

Various methods for determining hydroxylation are known in the art and are

10   described and exemplified herein. Any suitable method may be used for determining activity of the HIF hydroxylase such as by substrate or co-substrate utilization, product appearance such as peptide hydroxylation or down-stream effects mediated by hydroxylated or non-hydroxylated products.

Assays may be carried out to monitor directly for hydroxylation of the

15   relevant asparagine residue or another position. Alternatively, assays may be carried out to monitor for depletion of co-factors and co-substrates. Alternatively, such assays may monitor the downstream effects of hydroxylation of HIF or indeed inhibition of hydroxylation of HIF, for example, by monitoring the interaction between HIF and p300 or HIF mediated transcription. Alternatively, reporter gene

20   constructs driven by HIF regulated promoters may be used. Assays are also provided for the identification of enhancers of the activity of the HIF asparagine hydroxylase. Such enhancers may be used to reduce HIFα activity.

In one embodiment, a suitable substrate of the HIF asparagine hydroxylase is provided. This may be HIF-α or a fragment thereof which includes a CAD domain

25   or which includes a residue equivalent to Asn 803 of HIF-1α. The substrate may not be initially hydroxylated at the Asn 803 position. This may be achieved by providing synthetic polypeptide substrates, or by producing HIF-α polypeptides in bacterial cells, insect cells or mammalian cells or in *in vitro* transcription and translation systems. Alternatively, assays may be carried out over a selected time course such

30   that the substrate is produced during the course of the assay, initially in un-hydroxylated form.

The substrate, enzyme and potential inhibitor compound may be incubated together under conditions which, in the absence of inhibitor provide for hydroxylation of Asn 803, and the effect of the inhibitor may be determined by determining hydroxylation of the substrate. This may be accomplished by any

5   suitable means. Small polypeptide substrates may be recovered and subject to physical analysis, such as mass spectrometry or chromatography, or to functional analysis, such as the ability to bind to p300 (or displace a reporter molecule from p300). Such methods are known as such in the art and may be practiced using routine skill and knowledge. Determination may be quantitative or qualitative. In

10   both cases, but particularly in the latter, qualitative determination may be carried out in comparison to a suitable control, e.g. a substrate incubated without the potential inhibitor.

     Inhibitor compounds which are identified in this manner may be recovered and formulated as pharmaceutical compositions.

15   Assays in accordance with the present invention may involve monitoring for the interaction between p300 and HIF. The interaction between HIF and p300 is mediated by hydroxylation of HIF. Transcription and expression of genes known to be upregulated or down regulated by the presence of HIF could be monitored. In particular, upregulation of HIF regulated genes would demonstrate inhibition of

20   asparagine hydroxylation whereas down regulation would suggest enhancement or promotion of asparagine hydroxylation.

     In alternative embodiments, reporter constructs may be provided in which promoters mediated by HIF are provided operably linked to a reporter gene. Any suitable reporter gene could be used, such as for example enzymes which may then

25   be used in colorometric, fluorometric, fluorescence resonance or spectrometric assays.

     HIF asparagine hydroxlase is a 2OG dependent oxygenase. In the assay methods described herein, typically the HIF asparagine hydroxylase and the substrate of the hydroxylase are contacted in the presence of a co-substrate, such as 2-

30   oxoglutarate (2OG). The hydroxylase activity of the HIF hydroxylase may be determined by determining the turnover of the co-substrate. This may be achieved by determining the presence and/or amount of reaction products, such as hydroxylated

substrate or succinic acid. The amount of product may be determined relative to the amount of substrate. Typically, in such embodiments the substrate may be an HIF-α polypeptide and, for example, the product measured may be hydroxylated HIF-α polypeptide.

5   Alternatively, the end-point determination may be based on conversion of HIFα or peptide fragments (including synthetic and recombinant peptides) derived from HIFα into detectable products. Peptides may be modified to facilitate the assays so that they can be rapidly carried out and may be suitable for high throughput screening.

10   For example, reverse phase HPLC (C-18 octadecylsilane column), may be used to separate starting synthetic peptide substrates for HIF hydroxylase from the asparagine hydroxylated products, as the latter have a shorter retention time in the column. Modifications of this assay or alternative assays for HIF hydroxylase activity may employ, for example, mass spectrometric, spectroscopic, and/or

15   fluorescence techniques as are well known in the art (Masimirembwa C. *et al* Combinatorial Chemistry & High Throughput Screening (2001) 4 (3) 245-263, Owicki J. (2000) J. Biomol. Screen. 5 (5) 297-305, Gershkovich A *et al* (1996) J. Biochem. & Biophys. Meths. 33 (3) 135-162, Kraaft G. *et al* (1994) Meths. Enzymol. 241 70-86). Fluorescent techniques may employ versions of the substrate

20   modified in such as way as to carry out or optimise spectroscopic or fluorescence assays.

For example, HIFα polypeptide may be immobilised e.g. on a bead or plate, and hydroxylation of the appropriate residue detected using an antibody or other binding molecule which binds the CAD binding domain of HIFα with a different

25   affinity when an asparagine 803 is hydroxylated from when the residue is not hydroxylated. Such antibodies may be obtained by means of standard techniques which are well known in the art, e.g. using a hydroxylated HIFα peptide.

Binding of a molecule which discriminates between the hydroxylated and non-hydroxylated form of a HIFα polypeptide may be assessed using any technique

30   available to those skilled in the art, which may involve determination of the presence of a suitable label.

Assay methods of the present invention may also take the form of an *in vivo* assay. The *in vivo* assay may be performed in a cell line such as a yeast strain in which the relevant polypeptides or peptides are expressed from one or more vectors introduced into the cell.

5

In vivo assays

The assays may be carried out using cell based, organ based or whole animal assays conducted *in vivo*. Such assays may utilize the endogenous expression of the HIF hydroxylase nucleotides and/or polypeptides. In other forms of the invention,

10   upregulation of specific endogenous HIF hydroxylases may be achieved by stimulators of the expression thereof. Such stimulators may be growth factors or chemicals that upregulate specific HIF asparagine hydroxylases. In another form of the assay, nucleotide constructs may be introduced into cells or transgenic animals to increase production of one or more specific HIF asparagine hydroxylases.

15   HIF complexed with p300 activate hypoxia response elements that are found in the promoters and/or enhancers of endogenous genes that are regulated by the said HIF complexes. Such hypoxia response elements may also be isolated and operationally linked to reporter genes so as to assay the activity of the HIF complex through detection and/or quantitation of the reporter gene or its product. Therefore in

20   a further form of the invention the activity of a HIF-α polypeptide that is regulated by HIF asparagine hydroxylase will be assayed by measuring the effects of the HIF complex on the expression of an endogenous gene or reporter gene that is functionally linked to a HIF binding hypoxia response element. Examples of endogenous genes that are regulated in this way are to be found in the role of the aryl

25   hydrocarbon nuclear translocator (ARNT) in hypoxic induction of gene expression, see for example, Studies in ARNT-deficient cells. S.M. Wood, J.M. Gleadle, C.W. Pugh, O. Hankinson, P.J. Ratcliffe. Journal of Biological Chemistry 271 (1996) 15117-15123, and Hypoxia inducible expression of tumor-associated carbonic anyhydrases, C.C. Wykoff, N.J.P. Beasley, K.J. Turner, J. Pastorek, A. Sibtain. G.D.

30   Wilson, H. Turley, K. Talks, P.H. Maxwell, C.W. Pugh, P.J. Ratcliffe, A.L. Harris. Cancer Research 60 (2000) 7075-7083. Examples include but are not limited to glucose transporter isoform 1, phosphoglycerate kinase-1, carbon anhydrase isoform

9, vascular endothelial growth factor. Each of said genes contains one or hypoxia response elements that may be isolated and operationally linked as single or multiple copies to a reporter gene for the measurement of activity of a HIF-α polypeptide that varies in accordance with the activity of a HIF hydroxylase.

5   The activity of genes or gene products that are regulated by a HIF-α polypeptide in accordance with the activity of a HIF hydroxylase affects cellular, organ, and animal physiology. Assays that utilise a specific functional response that is regulated in accordance with the activity of a HIF-α polypeptide in accordance with the activity of a HIF hydroxylase may be used. Such responses include the

10   uptake rate of glucose or glucose analogues that are not metabolized, the growth of blood vessels by angiogenesis, the activity of a carbonic anhydrase enzyme. It is recognised that many other responses that operate at a cellular or systemic level are controlled by the activity of a HIF-α polypeptide in accordance with the activity of a HIF hydroxylase and may be utilized as assays of the said HIF hydroxylase activity

15   in further aspects of the invention.

A HIF-α polypeptide that is a substrate for a HIF hydroxylase may be fused to a further polypeptide so as to cause the activity of the said HIF hydroxylase to regulate the activity of the fusion peptide. Accordingly a further form of the invention provides for the assay of the activity of a fusion polypeptide. In the

20   preferred form such a fusion polypeptide may contain the whole of part of a HIF-α polypeptide, particularly including Asn 803, or the CAD domain. The Gal4 DNA binding domain including the amino acids 1-143 together with the Gal binding upstream activating sequence (UAS) is an example of such a transcription factor and cognate DNA response element whose operation can be assayed by those skilled in

25   the art.

Selectivity

It may also be advantageous to modulate HIF asparagine hydroxylase selectively, as a single target, or in selected hydroxylase groups as well as an entire

30   family. Agents which modulate HIF asparagine hydroxylase activity are therefore preferably specific i.e. they have an increased or enhanced effect on a HIF asparagine hydroxylase relative to other 2OG dependent oxygenases.

Assay methods as described herein may therefore further comprise contacting the test compound with one or more 2OG dependent oxygenases under conditions in which said 2OG dependent oxygenases are normally active and determining activity of said oxygenases. A difference in activity in the presence relative to the absence of test compound is indicative of the test compound modulating the activity of the one or more 2OG dependent oxygenases.

A test compound which provides increased or enhanced modulation of a HIF asparagine hydroxylase, relative to the one or more 2OG dependent oxygenases shows selectivity or specificity for the HIF hydroxylase.

2OG dependent oxygenases may include for example, clavaminte synthase, Alk B deacetoxycephalosporin C synthase, collagen-prolyl-4-hydroxylase, collagen prolyl-3-hydroxylase, lysyl hydroxylase, aspartyl hydroxylase, phytanoyl coenzyme A hydroxylase or gamma-butyrobetaine hydroxylase. 2OG dependent oxygenases may be mammalian, preferably human polypeptides.

The invention provides for the use of such selective inhibitors of HIF asparagine hydroxylases in the manufacture of a medicament for the treatment of a condition associated with reduced HIF activity.

Therapeutic Applications

A compound, substance or agent which is found to have the ability to affect the hydroxylase activity of a HIF asparagine hydroxylase, has therapeutic and other potential in a number of contexts. For therapeutic treatment, such a compound may be used in combination with any other active substance, e.g. for anti-tumour therapy another anti-tumour compound or therapy, such as radiotherapy or chemotherapy.

An agent identified using one or more primary screens (e.g. in a cell-free system) as having ability to modulate the HIFα asparagine hydroxylation activity of a HIF hydroxylase may be assessed further using one or more secondary screens. A secondary screen may involve testing for an increase or decrease in the amount of HIF-α or HIF activity, for example as manifest by the level of a HIF target gene or process present in a cell in the presence of the agent relative to the absence of the agent.

A HIF hydroxylase or a HIF polypeptide may be used in therapies which include treatment with full length polypeptides or fragments thereof, or otherwise modified polypeptides (e.g. to enhance stability or ensure targeting, including in conjunction with other active agents such as antibodies. For example, mutation of HIF-1α to replace Asn 803 with another amino acid residue may prevent hydroxylation and thus promote interaction of HIF-α with p300 and stimulate transcriptional activation.

Generally, an agent, compound or substance which is a modulator according to the present invention is provided in an isolated and/or purified form, i.e. substantially pure. This may include being in a composition where it represents at least about 90% active ingredient, more preferably at least about 95%, more preferably at least about 98%. Any such composition may, however, include inert carrier materials or other pharmaceutically and physiologically acceptable excipients, such as those required for correct delivery, release and/or stabilisation of the active agent. As noted below, a composition according to the present invention may include in addition to an modulator compound as disclosed, one or more other molecules of therapeutic use, such as an anti-tumour agent.

Products obtained by assays of the invention

The invention further provides compounds obtained or identified by methods of the present invention, and compositions comprising said compounds, such as pharmaceutical compositions wherein the compound is in a mixture with a pharmaceutically acceptable carrier or diluent. The carrier may be liquid, e.g. saline, ethanol, glycerol and mixtures thereof, or solid, e.g. in the form of a tablet, or in a semi-solid form such as a gel formulated as a depot formulation or in a transdermally administerable vehicle, such as a transdermal patch.

The invention further provides a method of treatment which includes administering to a patient an agent which interferes with the hydroxylation of the asparagine target residue of an HIFα polypeptide by a HIF hydroxylase. Such agents may include inhibitors of asparagine hydroxylase activity.

The therapeutic/prophylactic purpose may be related to the treatment of a condition associated with reduced or suboptimal or increased HIF levels or activity,

or conditions in which have normal HIF levels, but where an modulation in HIF activity such as an increase or decrease in HIF activity is desirable such as:

(i) ischaemic conditions, for example organ ischaemia, including coronary, cerebrovascular and peripheral vascular insufficiency. The therapy may be applied in two ways; following declared tissue damage, e.g. myocardial infarction (in order to limit tissue damage), or prophylactically to prevent ischaemia, e.g. promotion of coronary collaterals in the treatment of angina.

(ii) wound healing and organ regeneration

(iii) auto-, allo-, and xeno- transplantation.

(iv) systemic blood pressure

(v) cancer; HIFα is commonly up-regulated in tumour cells and has major effects on tumour growth and angiogenesis.

(vi) inflammatory disorders.

(vii) pulmonary arterial blood pressure, neurodegenerative disease.

Pharmaceutical Compositions

In various further aspects, the present invention thus provides a pharmaceutical composition, medicament, drug or other composition for such a purpose, the composition comprising one or more agents, compounds or substances as described herein, including HIF asparagine hydroxylase inhibitors, the use of such an composition in a method of medical treatment, a method comprising administration of such a composition to a patient, e.g. for treatment(which may include preventative treatment) of a medical condition as described above, use of such an agent compound or substance in the manufacture of a composition, medicament or drug for administration for any such purpose, e.g. for treatment of a condition as described herein, and a method of making a pharmaceutical composition comprising admixing such an agent, compound or substance with a pharmaceutically acceptable excipient, vehicle or carrier, and optionally other ingredients.

In one embodiment the method for providing a pharmaceutical composition may typically comprise:

(a)   identifying an agent by an assay method of the invention; and

(b)   formulating the agent thus identified with a pharmaceutically

acceptable excipient.

The pharmaceutical compositions of the invention may comprise an agent, polypeptide, polynucleotide, vector or antibody according to the invention and a pharmaceutically acceptable excipient.

5　　　　The agent may be used as sole active agent or in combination with one another or with any other active substance, e.g. for anti-tumour therapy another anti-tumour compound or therapy, such as radiotherapy or chemotherapy.

Whatever the agent used in a method of medical treatment of the present invention, administration is preferably in a "prophylactically effective amount" or a

10　　"therapeutically effective amount" (as the case may be, although prophylaxis may be considered therapy), this being sufficient to show benefit to the individual. The actual amount administered, and rate and time-course of administration, will depend on the nature and severity of what is being treated. Prescription of treatment, e.g. decisions on dosage etc, is within the responsibility of general practitioners and other

15　　medical doctors.

An agent or composition may be administered alone or in combination with other treatments, either simultaneously or sequentially dependent upon the condition to be treated, e.g. as described above.

Pharmaceutical compositions according to the present invention, and for use

20　　in accordance with the present invention, may include, in addition to active ingredient, a pharmaceutically acceptable excipient, carrier, buffer, stabiliser or other materials well known to those skilled in the art. In particular they may include a pharmaceutically acceptable excipient. Such materials should be non-toxic and should not interfere with the efficacy of the active ingredient. The precise nature of

25　　the carrier or other material will depend on the route of administration, which may be oral, or by injection, e.g. cutaneous, subcutaneous or intravenous.

Pharmaceutical compositions for oral administration may be in tablet, capsule, powder or liquid form. A tablet may include a solid carrier such as gelatin or an adjuvant. Liquid pharmaceutical compositions generally include a liquid

30　　carrier such as water, petroleum, animal or vegetable oils, mineral oil or synthetic oil. Physiological saline solution, dextrose or other saccharide solution or glycols such as ethylene glycol, propylene glycol or polyethylene glycol may be included.

For intravenous, cutaneous or subcutaneous injection, or injection at the site of affliction, the active ingredient will be in the form of a parenterally acceptable aqueous solution which is pyrogen-free and has suitable pH, isotonicity and stability. Those of relevant skill in the art are well able to prepare suitable solutions using, for example, isotonic vehicles such as Sodium Chloride Injection, Ringer's Injection, Lactated Ringer's Injection. Preservatives, stabilisers, buffers, antioxidants and/or other additives may be included, as required.

Liposomes, particularly cationic liposomes, may be used in carrier formulations. Examples of techniques and protocols mentioned above can be found in Remington's Pharmaceutical Sciences, 16th edition, Osol, A. (ed), 1980.

The substance or composition may be administered in a localised manner to a particular site or may be delivered in a manner in which it targets particular cells or tissues, for example using intra-arterial stent based delivery.

Targeting therapies may be used to deliver the active substance more specifically to certain types of cell, by the use of targeting systems such as antibody or cell specific ligands. Targeting may be desirable for a variety of reasons, for example if the agent is unacceptably toxic, or if it would otherwise require too high a dosage, or if it would not otherwise be able to enter the target cells.

In a further embodiment the invention provides for the use of an agent of the invention in the manufacture of a medicament for the treatment of a condition associated with increased or decreased HIF levels or activity. The condition may, for example, be selected from the group consisting of ischaemia, wound healing, auto-. allo-, and xeno- transplantation, systemic high blood pressure, cancer, and inflammatory disorders.

Examples

Example 1

The position on Asn803 of human HIF-1α that is hydroxylated was identified as described in the following. cDNA sequences encoding FIH-1 were cloned into the pET28a(+) vector (from Novagen) to yield FIH-1 protein with an N-terminal His_6tag to facilitate purification. Purification of crude material by nickel affinity

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chromatography, followed by thrombin cleavage of the His$_6$ tag, and size exclusion chromatography (Superdex S75) yielded >95% pure protein by SDS-PAGE analysis. Mass spectrometry confirmed the identity of the isolated species. The 19-residue peptide comprising amino acids 788-806 of human HIF-1α was modified by aerobic incubation with FIH-1 FIH (Hewitson et al., J BIOL CHEM 277 (29): 26351-26355, 2002) in the presence of ascorbate, DTT, catalase, 2-oxoglutarate, and iron(II) for 30 minutes at 37°C. The reaction was quenched by cooling to 4°C and addition of an equal volume of methanol. Precipitate was removed by centrifugation and the supernatant purified by HPLC using a Jupiter C4 column (15cm x 4.6mm). Peptide was eluted using a gradient of acetonitrile in 0.1% trifluoroacetic acid, freeze-dried from the HPLC solvent for amino acid and mass spectrometric analyses. The sample was freeze-dried a second time from D$_2$O in preparation for NMR analysis.

Catalytic FIH-1 mediated hydroxylation of a synthetic 19 residue peptide corresponding to residues 788-806 of HIF-1α was confirmed by mass spectrometric analysis of HPLC purified material: Native peptide 19mer [M+2H]$^{2+}$ = 1026.67Da, modified peptide 19mer [M+2H]$^{2+}$ = 1034.61Da, a mass difference of +8Da of the doubly charged ions, corresponding to +16Da in the peptide (oxygen). N-Terminal Edman degradation of the product peptide gave the following sequence: DESGLPQLTSYDCEVxA, where x was not asparagine. The peak from this (16th) cycle of Edman degradation ran to a similar position as the β-hydroxyasparagine standard. Acid hydrolysis of the modified peptide followed by amino acid analysis showed the presence of β-hydroxyaspartic acid only.

Both ^{1}H and ^{13}C chemical shift changes between the 19mer peptide substrate and the HPLC purified incubation product were assessed by 2D ^{1}H-^{13}C HSQC experiments. In the substrate a grouping of four β-CH$_2$ resonances were assigned as belonging to Asp-1, Tyr-11, Asp-12 and Asn-16 according to their ^{1}H and ^{13}C shifts (Evans, J. N. S. (1995) Biomolecular NMR Spectroscopy, Oxford University Press, Oxford, UK). In the product it was clear from both the 2D HSQC and the 1D proton spectra that only three of these four resonances are present. Comparison of the two spectra indicates that the signal assigned to the Asn-16 β-carbon (at δH 2.813 and 2.695ppm and δC 37.40ppm in the substrate) has disappeared, consistent with

hydroxylation of the asparagine residue at its β-carbon. The resonances due to the two aspartic acid residues had shifted slightly, presumably due to changes in the protonation state, and now occur at a similar ^{1}H chemical shift as the β-protons of the asparagine in the substrate. A difference in the oxidation state of the cysteine

5   between the two samples in unlikely given the near identical chemical shifts for the cysteinyl β-carbon and hydrogens. The change from a double doublet to a single doublet for the β-hydrogen of the hydroxylated residue also rules out any possibility the observed alterations in the NMR spectrum are due to aggregation. Two new resonances have appeared in the product spectrum at δH 4.913 ppm and δC 56.26

10   ppm and at δH 4.654 ppm and δC 72.22 ppm. These resonances correlate with one another in the 2D COSY spectrum and share a ^{1}H-^{1}H coupling constant of 2.4 Hz and are therefore assigned as the CH^α-CH^β of the hydroxylated asparagine. The appearance of these resonances also coincides with the disappearance of the δH 4.706 ppm and δC 51.43 ppm resonances observed in the substrate spectra, which is

15   therefore assigned as the CH^α of the parent asparagine prior to modification. Comparison of the CH^α-CH^β coupling constant of 2.4Hz observed for the hydroxylated Asn-803, with literature values implied the *threo* isomer is produced.

In summary of the above `NMR experiments: The HSQC experiments gave direct evidence for hydroxylation occurring at the β-carbon of the target asparagine,

20   with the hydroxylated β-carbon appearing significantly deshielded (at 72.22 ppm) and the adjacent α-carbon deshielded to a lesser extent (at 56.26 ppm) relative to the parent asparagine. Changes of these magnitudes in the ^{13}C chemical shifts are inconsistent with hydroxylation of the side-chain nitrogen, but consistent with hydroxylation at the β-carbon. Further, the ^{13}C spectrum of free DL-*threo*-β-

25   hydroxyasparagine (this study), has resonances at 58.63ppm and 73.85ppm corresponding to α- and β-carbons. The product assignment is also consistent with ^{1}H-NMR chemical shifts of the α- and β-hydrogens in the β-hydroxyaspartyl residues in EGF-like domains which are 4.48ppm and 4.36ppm respectively (with respect to water at 4.75ppm) when calcium is absent (Selander et al, Biochemistry

30   29, 8111-8118). The analysis of the coupling constant reported here suggests that the *threo*-isomer is the one formed on hydroxylation of Asn-803 by FIH-1.

Two reports (Dames et al., (2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 52715276; Freedman et al, (2002) *Proc. Natl. Acad. Sci. U. S. A.* **99**, 53675372) reveal how β-hydroxylation of Asn-803 of HIF-1α would be damaging to complex formation with p300. Although the position of hydroxylation was not identified in either report, both

5   imply that hydroxylation at the *pro-S* position of the β-carbon, *i.e.* to give the *threo (2S, 3S)*-isomer, would interfere with the hydrogen bonding that maintains the α-helical conformation adopted by this part of HIF-1α, and also create a need for the energetically unfavourable desolvation of the hydroxyl group. A steric clash between the inserted *pro-S* hydroxyl group and Ile-353 (numbering from Dames *et a l*(2002)

10 *Proc. Natl. Acad. Sci. U. S. A.* **99**, 52715276) of p300 would disrupt the interaction of the two proteins. Presumably the same mechanism is also used to abrogate the interaction of HIF-2α and p300. The discovery that it is the beta-position of Asn-803 that is modified and the associated mechanistic implications may be used in the design of compounds that bind to p300 thereby displacing HIF-alpha and/in the

15 design of inhibitors of FIH (see below); in both cases to enable pro-angiogenetic pharmaceutical agents.

Example 2

To obtain an FIH:CAD complex suitable for X-ray analysis without oxidation

20 of the CAD or the $Fe^{(II)}$, FIH and various CAD fragments from seven to fifty-two residues were co-crystallised with $Fe^{(II)}$ and 2OG under anaerobic conditions. Structures were also obtained for FIH complexed with $Fe^{(II)}$ and *N*-oxaloylglycine (NOG, an FIH inhibitor), (anaerobically) and $Zn^{(II)}$ and NOG (aerobically). These structures were solved by molecular replacement using a model obtained by multiple

25 anomalous dispersion on selenomethionine-substituted apo-FIH. Crystalline FIH:CAD complexes were obtained with $CAD_{786-826}$, $Fe^{(II)}$ and NOG or 2OG (structures 1 and 2, Table 1), $CAD_{775-826}$ with $Zn^{(II)}$ and NOG (structure 3). Crystallisation attempts with $CAD_{787-806}$, $CAD_{850-862}$ (HIF-2α, equivalent to HIF-1α $CAD_{802-814}$) and $CAD_{800-806}$ did not result in FIH:CAD complexes; solution analyses

30 indicated that CAD fragments shorter than twenty resides are not efficient *in vitro* substrates.

Table 1 Summary of FIH:CAD-fragment complex structures[*]

Structure No.	Resolution (Å)	Metal	Co-substrate	Co-crystallisation CAD peptide	Site 1 CAD residues resolved	Site 2 CAD residue resolved	R_{free} (%)	R.m.s.d. from Struct. 1 (Å)	PDB ID.
1	2.15	Fe	NOG	HIF-1α 786-826	795-806	812-823	21.3	-	1H2K
2	2.25	Fe	2OG	HIF-1α 786-826	795-806	813-822	21.7	0.149	1H2L
3	2.50	Zn	NOG	HIF-1α 775-826	795-806	813-822	22.5	0.136	1H2M
4	2.84	Fe	2OG	HIF-2α 850-862	-	-	25.7	0.226	1H2N

*Crystalline FIH:CAD complexes were also obtained with $Fe^{(II)}$, HIF-1α 775-786 and 2OG or NOG.

Methods employed in structural work

Protein expression, purification and crystallisation

FIH, $CAD_{775-826}$ and $CAD_{786-826}$ were prepared as described (Hewitson et al., J BIOL CHEM 277 (29): 26351-26355, 2002). Selenomethionine (SeMet) substituted

5 · FIH was produced using a metabolic inhibition protocol and LeMaster media supplemented with 50 mg/l L-selenomethionine. SeMet incorporation was >95 % by ESI-MS. Aerobic crystallisation of SeMet FIH (at 11 mg ml^{-1}) was accomplished by hanging-drop vapour diffusion at 17 °C. The mother liquor consisted of 1.2 M ammonium sulphate, 4 % PEG 400 and 0.1 M Hepes pH 7.5. Crystallisation of

10 FIH:Fe:CAD fragment complexes was accomplished under an anaerobic atmosphere of argon in a Belle Technology glove box (0.3-0.4 ppm O_2) using the same mother liquor and a solution containing FIH (at 11 mg ml^{-1}), Fe^{2+} (1 mM), 2OG/NOG (2 mM) and CAD fragment (1 mM). Crystallisation of FIH:Zn:CAD fragment was accomplished aerobically under similar conditions. Peptides were either synthesised

15 by solid phase peptide synthesis or purchased from Biopeptide Co. (San Diego, USA).

Crystallographic data collection and structure refinement

Crystals were cryocooled by plunging into liquid nitrogen and X-ray data

20 were collected at 100 K using a nitrogen stream. Cryoprotection was accomplished by sequential transfer into a solution containing 1.2 M ammonium sulphate, 3 % PEG 400, 0.1 M Hepes pH 7.5 and 10 % followed by 24 % glycerol. A three-wavelength multiple anomalous dispersion (MAD) dataset was collected to 2.9 Å resolution on beamline 14.2 of the Synchrotron Radiation Source, Daresbury, U.K.

25 Data from crystals of FIH:CAD complexes were collected on beamlines 14.2, 9.6 or 9.5 using ADSC Quantum 4 (14.2 and 9.6) or MarCCD detectors (9.5). All data was processed with the program MOSFLM and the CCP4 suite[Collaborative Computational Project Number 4 *Acta Crystallogr.* D50, 760-763 (1994)]. The crystals belonged to space group $P4_12_12$. Six selenium positions were located and

30 phases calculated using the program SOLVE (Terwilliger et al. D55, 849-861, 1999). Density modification, which increased the figure of merit from 0.56 to 0.66, was performed using RESOLVE (Terwilliger *Acta Crystallogr.* D56, 965-972 2000).

An initial model was built using the program O (Jones et al, *Acta. Crystallogr.* A47, 110-119, 1991).and refined against the SeMet data (remote wavelength) using the program CNS (Brunger *Acta Crystallogr.* D54, 905-921, 1998). . One cycle of simulated annealing followed by grouped *B*-factor refinement brought the R_{free} to

5   36.2 %. Following further rebuilding and refinement, which brought the R_{free} to 32.3 %, the model was transferred to the 2.15 Å dataset. Rebuilding and refinement using REFMAC5 including addition of Fe, substrate and solvent molecules, and refinement of TLS parameters brought the conventional *R*-factor to 17.8 % and the R_{free} to 21.3 %. The following residues are missing in the current model: 1-15 and 304-306 of

10   FIH, 786-794, 807-811 and 824-826 of the CAD fragment. According to PROCHECK there are no Ramachandran outliers and 90.7 % of residues have most favourable backbone conformations. For the CAD peptide, 77.8% of residues are in the most favourable region with the remaining 22.2 % in additionally allowed regions.

15   Other structures were solved by molecular replacement using the coordinates from the 2.15 Å data and refinement using REFMAC5. In all structures electron density for the Fe and 2OG/NOG was visible throughout refinement. Significant positive difference electron density was observed between the iron and the CAD Asn803 β-carbon. Since *B*-factor differences between FIH and CAD imply that the

20   CAD is not at 100 % occupancy, this may represent an alternative binding-mode for the 1-carboxylate 2OG in the absence of substrate although it could also be due to a ligating water molecule, again in the absence of substrate.

Overview of FIH structure

25   The core of FIH comprises a double-stranded beta-helix (DSBH or jellyroll) motif formed from eight β-strands, β8-β11 and β14-β17. Residues 220-259 form an insert between strands 4 and 5 of the DSBH. The bottom face of the DSBH is flanked by an additional four β-strands from the N-terminal region to form an eight-membered antiparallel β-sheet. The N-terminal strand β1 bisects the face of the

30   DSBH opposite to the active site. The β1 strand has a 360° twist located at a PXXP sequence, in between its interactions with β14 and β2. A similarly positioned β-

strand is found in most 2OG oxygenases, though not always from the same region of
the protein. The sheet-helix-sheet motif formed by $\beta1$, $\alpha1$ and $\beta2$ is conserved in all
enzymes of this class except proline 3-hydroxylase and a similar fold in this region is
found in the related $Cu^{(II)}$ utilising quercetin 2,3-dioxygenase (QD) (Fusetti et al,

5   STRUCTURE 10 (2): 259-268 2002). The topology of FIH unequivocally defines it
as an iron-binding member of the cupin structural family which already includes QD
and $Mn^{(II)}$ utilising Type II phosphomannose isomerase (Clissold, P. M., and
Ponting, C. P. (2001) *Trends Biochem. Sci.* **26**, 79).

10   Related enzymes to FIH

FIH has significant sequence similarity with the JmjC homology region of the
jumonji transcription factors (Clissold, P. M., and Ponting, C. P. (2001) *Trends
Biochem. Sci.* **26**, 79; Hewitson et al., J BIOL CHEM 277 (29): 26351-26355, 2002).
These proteins are members of the cupin structural superfamily and have been

15   implicated in cell growth and heart development. The 2OG oxygenase iron binding
residues had been identified in some JmjC domains but not assigned as an iron
binding motif. Sequence searches in the light of the FIH structure reveal many JmjC
proteins with conserved residues that include both this motif and others, including
FIH residues Lys214 and Thr196 that are unusually involved in binding the 5-

20   carboxylate of 2OG. The structure thus reveals that FIH is a one of a large family of
iron and 2OG dependent oxygenases involved in the regulation of transcription.
Since some of the assigned JmjC domains other than FIH are associated with
diseases and particular phenotypes their (e.g.) inhibition may be of therapeutic value.
(See e.g. Hu et al, ONCOGENE 20 (47): 6946-6954 OCT 18 2001 and Clissold, P.

25   M., and Ponting, C. P. (2001) *Trends Biochem. Sci.* **26**, 79 and references therein).

Table 2. Partial sequence alignment of FIH with a selection of JmjC domain
containing proteins. FIH secondary structure is indicated above the alignment.
Selected 2OG binding residues found in FIH are indicated by dark triangles under the
alignment and the two iron binding residues by light triangles. SWALL accession

30   numbers are indicated on the left of the alignment.

TABLE 2

		α7	β8	β9	β10	β11
Hs	Q96Q07 FIH	FNWWINKQQ------GKRGWGQ-----	LTSNILLIGMEGNVRPANFIDEQ------	QFFAQIRGY---	RRCILFPPD	
Dm	Q9VU77	------EIAADLR-----VSDLDFAQQ(4)-	EPDAVNFWLDERAVHSMHKDPY----	ENVCVISGH---	KDEVLIRPH	
Dm	Q9W0M3	------AIKEDIS-----IPDYCTI(5)PGAVDIKAWIPAG	IVSPMEVDRK----	HNLLCQVTGS---	KRIIAAPA	
Hs	Q9UPP1	------KIVRRLS--WENIWBEEC(4)PNVQRKYCLMSVRDSY	QDEHIDFGGT---	SVWYHVLKGE---	KIFYLIRPT	
Ce	Q9BI67	------RFVQEIS---MVNRIWFDV(20)PRVEQFCLANMAGSY	DFHVDFGGS--	SVYYHILKGE---	KIFYINAPT	
Ce	Q20367	------RFVQDIS--MAKRLWSDV(11)PKIEQICAAAMANIY	QDFVDFGGT--	SVYFHVFRGE(4)	KIFYIAAPT	
Dm	Q9VHH9	------EIVRQID---WDVVWPKQ(16)PRVQRYCLMSVRKCY	LDEHIDFGGT--	SVWYHILRGS(1)	KVFWLIPPT	
Sc	P40034	---QNDIVDKIW---SFNGHLEKV(11)PKVTKYILMSVKDAY	TDFHLDFAGT---	SVYYNVISGQ---	KKFLLFPPT	
Rn	Q9R153 PAS81	-KTDVFQEVM-WSDFGFPGRNGQE---	STIWIISIGAHRPCHLDSYG---	CNLVEQVQGR---	KRWHLFPPE	
Ce	Q9GY14	FEDDLFHYAD-----DKKRPPH------	RWFVMGPARSGRAIRIDPLGISAWNSILQGH---	KRWVLLPPI		
Dm	Q9V6L0	------TILDYVNKDYNIQIDSVNT-----	AYIYEFMWKDTFAWHTEDMDLYSINYLHFGEP---	KTWIYVPPE		
Hs	O94877	------TVLDVVEEEGISIEGVNT-----	PYIYEFMWKDTFAWHTEDMDLYSINYLHFGEP---	RSWYAIPPE		
Ce	Q9U297	------TILEDTNYE----IK(VNT-----	VYIYEFMYKDTFFWHAEDMDIYSINFLHFGAP---	KYWFAISSE		
Dm	Q9V333	------TILNLVNIDYNIIIDAVNT-----	AYIYEFMWIK(9FAWHTEDMDLYSINYLHFGAP---	KTWYALPPA		
Hs	O75164	------TILDLVEKESGITIBGVNT-----	PYIYEFMWKDSFAWHTEDMDLIYSINYLHFGEP---	RSWYSVPPE		
Dm	Q9VJ97	------FASDWLNEQL-----IQQSKDDY------	RFVYMGPKNSWTSYHADVEGSFSWSTNIVGL---	KRWLIMPPG		
Sp	O13977	------FADDWLNAVV------IDCESDDF------	RFAYLGSHLGTUGLHTDVYASHSEGVNLCGGV---	KCWLFIDPK		

Hs = Homo sapiens
Dm = Drosophila melanogaster
Ce = Caenorhabditis elegans
Sc = Saccharomyces cerevisiae
Rn = Rattus norvegicus
Sp = Schizosaccharomyces pombe

FIH   = Factor Inhibiting HIF
PAS81 = Protein associating with small stress protein

TABLE 3 – Coordinates for structures 1 to 4

Structure 1

Below are the coordinates for structure 1 (the 2.15 Å structure of FIH:Fe(II):NOG:CAD):

```
HEADER      TRANSCRIPTION ACTIVATOR/INHIBITOR        12-AUG-02   1H2K
TITLE       FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX WITH HIF-1 ALPHA
TITLE      2 FRAGMENT PEPTIDE
COMPND      MOL_ID: 1;
COMPND     2 MOLECULE: FACTOR INHIBITING HIF1;
COMPND     3 CHAIN: A;
COMPND     4 ENGINEERED: YES;
COMPND     5 MOL_ID: 2;
COMPND     6 MOLECULE: HYPOXIA-INDUCIBLE FACTOR 1 ALPHA;
COMPND     7 SYNONYM: HIF-1 ALPHA, ARNT INTERACTING.PROTEIN,
COMPND     8  MEMBER OF PAS PROTEIN 1;
COMPND     9 CHAIN: S;
COMPND    10 FRAGMENT: C-TERMINAL·TRANSACTIVATION DOMAIN FRAGMENT
COMPND·   11  RESIDUES 786-826
SOURCE      MOL_ID: 1;
SOURCE     2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE     3 ORGANISM_COMMON: HUMAN;
SOURCE     4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE     5 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE     6 EXPRESSION_SYSTEM_PLASMID: PET28A(+);
SOURCE     7 MOL_ID: 2;
SOURCE     8 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE     9 ORGANISM_COMMON: HUMAN;
SOURCE    10 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE    11 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE    12 EXPRESSION_SYSTEM_PLASMID: PGEX-GP-1
KEYWDS      FIH, HIF, DSBH, OXYGENASE, TRANSCRIPTION, HYPOXIA,
KEYWDS     2 2-OXOGLUTARATE, ASPARAGINYL HYDROXYLASE, PHOSPHORYLATION
EXPDTA      X-RAY DIFFRACTION
AUTHOR      J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,I.SCHLEMMINGER,
AUTHOR     2 J.F.SEIBEL,C.J.SCHOFIELD
REVDAT     1   03-SEP-02 1H2K     0·
JRNL          AUTH   J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,
JRNL        · AUTH 2 I.SCHLEMMINGER,J.F.SEIBEL,C.J.SCHOFIELD
JRNL          TITL   FIH:HIF-FRAGMENT COMPLEXES
JRNL          REF    TO BE PUBLISHED
JRNL          REFN
REMARK     2
REMARK     2 RESOLUTION. 2.15 ANGSTROMS.
REMARK     3
REMARK     3 REFINEMENT.
REMARK     3    PROGRAM     : REFMAC 5.0
REMARK     3    AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK     3
REMARK     3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK     3
REMARK     3 DATA USED IN REFINEMENT.
REMARK     3    RESOLUTION RANGE HIGH (ANGSTROMS) :   2.15
REMARK     3    RESOLUTION RANGE LOW  (ANGSTROMS) :  18.50
REMARK     3·   DATA CUTOFF           (SIGMA(F)) : NONE
REMARK     3    COMPLETENESS FOR RANGE       (%) :  99.28
REMARK     3    NUMBER OF REFLECTIONS        :    28171
REMARK     3
```

```
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD            : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION   : RANDOM
REMARK   3   R VALUE      (WORKING + TEST SET) : 0.18026
REMARK   3   R VALUE             (WORKING SET) : 0.17761
REMARK   3   FREE R VALUE                      : 0.21305
REMARK   3   FREE R VALUE TEST SET SIZE   (%)  : 7.7
REMARK   3   FREE R VALUE TEST SET COUNT       : 2340
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED              :     20
REMARK   3   BIN RESOLUTION RANGE HIGH              :   2.150
REMARK   3   BIN RESOLUTION RANGE LOW               :   2.205
REMARK   3   REFLECTION IN BIN     (WORKING SET) :     1906
REMARK   3   BIN R VALUE           (WORKING SET) :    0.222
REMARK   3   BIN FREE R VALUE SET COUNT             :     152
REMARK   3   BIN FREE R VALUE                       :    0.257
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   PROTEIN ATOMS        : 2875
REMARK   3   NUCLEIC ACID ATOMS   : 0
REMARK   3   HETEROGEN ATOMS      : 21
REMARK   3   SOLVENT ATOMS        : 194
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT          (A**2) : NULL
REMARK   3   MEAN B VALUE        (OVERALL, A**2) :   25.725
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) :    -0.27
REMARK   3    B22 (A**2) :    -0.27
REMARK   3    B33 (A**2) :     0.55
REMARK   3    B12 (A**2) :     0.00
REMARK   3    B13 (A**2) :     0.00
REMARK   3    B23 (A**2) :     0.00
REMARK   3
REMARK   3 ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3  ESU BASED ON R VALUE                            (A): 0.174
REMARK   3  ESU BASED ON FREE R VALUE                       (A): 0.156
REMARK   3  ESU BASED ON MAXIMUM LIKELIHOOD                 (A): 0.147
REMARK   3  ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 5.588
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
REMARK   3   CORRELATION COEFFICIENT FO-FC      :   0.961
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE :   0.947
REMARK   3
REMARK   3 RMS DEVIATIONS FROM IDEAL VALUES      COUNT    RMS     WEIGHT
REMARK   3   BOND LENGTHS REFINED          (A):  2973 ; 0.012 ; 0.021
REMARK   3   BOND LENGTHS OTHERS           (A):  2561 ; 0.001 ; 0.020
REMARK   3   BOND ANGLES REFINED      (DEGREES):  4044 ; 1.374 ; 1.949
REMARK   3   BOND ANGLES OTHERS       (DEGREES):  5979 ; 0.722 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1 (DEGREES):   352 ; 4.018 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 3 (DEGREES):   515 ;17.698 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS    (A**3):   416 ; 0.086 ; 0.200
REMARK   3   GENERAL PLANES REFINED        (A):  3333 ; 0.005 ; 0.020
REMARK   3   GENERAL PLANES OTHERS         (A):   604 ; 0.002 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED   (A):   714 ; 0.218 ; 0.300
REMARK   3   NON-BONDED CONTACTS OTHERS    (A):  2499 ; 0.204 ; 0.300
REMARK   3   H-BOND (X...Y) REFINED        (A):   259 ; 0.152 ; 0.500
REMARK   3   H-BOND (X...Y) OTHERS         (A):     4 ; 0.087 ; 0.500
REMARK   3   SYMMETRY VDW REFINED          (A):    18 ; 0.245 ; 0.300
REMARK   3   SYMMETRY VDW OTHERS           (A):    72 ; 0.248 ; 0.300
```

```
REMARK   3   SYMMETRY H-BOND REFINED          (A):      13 ; 0.255 ; 0.500
REMARK   3   SYMMETRY H-BOND OTHERS           (A):       1 ; 0.052 ; 0.500
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS   COUNT    RMS     WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED       (A**2): 1777 ; 0.618 ; 1.500
REMARK   3   MAIN-CHAIN ANGLE REFINED      (A**2): 2862 ; 1.177 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED       (A**2): 1196 ; 1.812 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED      (A**2): 1182 ; 3.002 ; 4.500
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3  TLS DETAILS
REMARK   3   NUMBER OF TLS GROUPS   :      1
REMARK   3
REMARK   3   TLS GROUP :      1
REMARK   3    NUMBER OF COMPONENTS GROUP :      2
REMARK   3    COMPONENTS          C SSSEQI    TO   C SSSEQI
REMARK   3    RESIDUE RANGE :   A    15         A    451
REMARK   3    RESIDUE RANGE :   S   795         S    823
REMARK   3    ORIGIN FOR THE GROUP (A):  21.6620   27.4620   28.2370
REMARK   3    T TENSOR
REMARK   3      T11:   0.1474 T22:    0.0149
REMARK   3      T33:   0.0919 T12:   -0.0099
REMARK   3      T13:  -0.0455 T23:    0.0363
REMARK   3    L TENSOR
REMARK   3      L11:   1.0098 L22:    2.2577
REMARK   3      L33:   1.2037 L12:    0.6963
REMARK   3      L13:   0.4840 L23:    1.0420
REMARK   3    S TENSOR
REMARK   3      S11:   0.0288 S12:   -0.1525 S13:   -0.0400
REMARK   3      S21:   0.1459 S22:    0.0002 S23:    0.1021
REMARK   3      S31:   0.1876 S32:   -0.0468 S33:   -0.0290
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS    :    1.40
REMARK   3   ION PROBE RADIUS    :    0.80
REMARK   3   SHRINKAGE RADIUS    :    0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: HYDROGENS HAVE BEEN ADDED IN THE
REMARK   3   RIDING POSITIONS
REMARK   4
REMARK   4 1H2K COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY EBI   ON 12-AUG-2002.
REMARK 100 THE EBI ID CODE IS EBI-11170.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 15-MAY-2002
REMARK 200  TEMPERATURE           (KELVIN) : 100
REMARK 200  PH                             : 7.5
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON             (Y/N)  : Y
REMARK 200  RADIATION SOURCE               : SRS BEAMLINE PX9.6
REMARK 200  BEAMLINE                       : PX9.6
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE   (M/L)  : M
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REMARK 200   WAVELENGTH OR RANGE          (A) : 0.87
REMARK 200   MONOCHROMATOR                    : NULL
REMARK 200   OPTICS                           : NULL
REMARK 200
REMARK 200   DETECTOR TYPE                    : CCD
REMARK 200   DETECTOR MANUFACTURER            : ADSC
REMARK 200   INTENSITY-INTEGRATION SOFTWARE : MOSFLM
REMARK 200   DATA SCALING SOFTWARE            : SCALA
REMARK 200
REMARK 200   NUMBER OF UNIQUE REFLECTIONS   : 30574
REMARK 200   RESOLUTION RANGE HIGH       (A) : 2.15
REMARK 200   RESOLUTION RANGE LOW        (A) : 18.17
REMARK 200   REJECTION CRITERIA  (SIGMA(I)) : NONE
REMARK 200
REMARK 200 OVERALL.
REMARK 200   COMPLETENESS FOR RANGE      (%) : 99.2
REMARK 200   DATA REDUNDANCY                  : 6.3
REMARK 200   R MERGE                     (I) : 0.052
REMARK 200   R SYM                       (I) : NULL
REMARK 200   <I/SIGMA(I)> FOR THE DATA SET  : 9.9
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200   HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.15
REMARK 200   HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.27
REMARK 200   COMPLETENESS FOR SHELL      (%) : 96.0
REMARK 200   DATA REDUNDANCY IN SHELL        : 3.4
REMARK 200   R MERGE FOR SHELL           (I) : 0.331
REMARK 200   R SYM FOR SHELL             (I) : NULL
REMARK 200   <I/SIGMA(I)> FOR SHELL          : 1.5
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MAD
REMARK 200 SOFTWARE USED: SOLVE
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS  (%): 63
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.4
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 1.2M AMMONIUM SULPHATE, 4% PEG400,
REMARK 280  0.1M HEPES PH7.5, ARGON ATMOSPHERE, 11MG/ML PROTEIN WITH
REMARK 280  1MM FE(II), 2.5MM NOG AND 2.5MM PEPTIDE
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 41 21 2
REMARK 290
REMARK 290       SYMOP      SYMMETRY
REMARK 290       NNNMMM     OPERATOR
REMARK 290        1555     X,Y,Z
REMARK 290        2555     -X,-Y,1/2+Z
REMARK 290        3555     1/2-Y,1/2+X,1/4+Z
REMARK 290        4555     1/2+Y,1/2-X,3/4+Z
REMARK 290        5555     1/2-X,1/2+Y,1/4-Z
REMARK 290        6555     1/2+X,1/2-Y,3/4-Z
REMARK 290        7555     Y,X,-Z
REMARK 290        8555     -Y,-X,1/2-Z
REMARK 290
REMARK 290       WHERE NNN -> OPERATOR NUMBER
REMARK 290               MMM -> TRANSLATION VECTOR
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REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290     SMTRY1   1  1.000000  0.000000  0.000000·      0.00000
REMARK 290     SMTRY2   1  0.000000  1.000000  0.000000       0.00000
REMARK 290     SMTRY3   1  0.000000  0.000000  1.000000       0.00000
REMARK 290     SMTRY1   2 -1.000000  0.000000  0.000000       0.00000
REMARK 290     SMTRY2   2  0.000000 -1.000000  0.000000       0.00000
REMARK 290     SMTRY3   2  0.000000  0.000000  1.000000      73.32800
REMARK 290     SMTRY1   3  0.000000 -1.000000  0.000000      43.08050
REMARK 290     SMTRY2   3  1.000000  0.000000  0.000000  .   43.08050
REMARK 290     SMTRY3   3  0.000000  0.000000  1.000000      36.66400
REMARK 290     SMTRY1   4  0.000000  1.000000  0.000000      43.08050
REMARK 290     SMTRY2   4 -1.000000  0.000000  0.000000      43.08050
REMARK 290     SMTRY3   4  0.000000  0.000000  1.000000  .  109.99200
REMARK 290     SMTRY1   5 -1.000000  0.000000  0.000000      43.08050
REMARK 290     SMTRY2   5  0.000000  1.000000  0.000000      43.08050
REMARK 290     SMTRY3   5  0.000000  0.000000 -1.000000      36.66400
REMARK 290     SMTRY1   6  1.000000  0.000000  0.000000      43.08050
REMARK 290     SMTRY2   6  0.000000 -1.000000  0.000000      43.08050
REMARK 290     SMTRY3   6  0.000000  0.000000 -1.000000     109.99200
REMARK 290     SMTRY1   7  0.000000  1.000000  0.000000       0.00000
REMARK 290     SMTRY2   7  1.000000  0.000000  0.000000       0.00000
REMARK 290     SMTRY3   7  0.000000  0.000000 -1.000000       0.00000
REMARK 290     SMTRY1   8  0.000000 -1.000000  0.000000       0.00000
REMARK 290     SMTRY2   8 -1.000000  0.000000  0.000000       0.00000
REMARK 290     SMTRY3   8  0.000000  0.000000 -1.000000      73.32800
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF   2 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 300
REMARK 300 QUATERNARY STRUCTURE FOR THIS ENTRY: TETRAMERIC
REMARK 300
REMARK 300 THE PROTEIN IS A HOMODIMER FORMED BY CHAIN A.
REMARK 300 A HETERODIMERIC ASSOCIATION OF CHAIN A WITH CHAIN S
REMARK 300 PRODUCES A TETRAMER.
REMARK 300
REMARK 300 THE BURIED SURFACE AREA SHOWN BELOW IS AN AVERAGE
REMARK 300 CALCULATED FOR THE HETEROTETRAMER AND DOES NOT
REMARK 300 CORRESPOND TO THE BURIED SURFACE AREA FOR THE
REMARK 300 HOMODIMER OF CHAIN A
REMARK 300
REMARK 300 THE HETERO-ASSEMBLY ·DESCRIBED BY REMARK 350 APPEARS
REMARK 300 TO BE A CASE OF STRONG CRYSTAL PACKING WITH
REMARK 300 THE MEAN DIFFERENCE IN ACCESSIBLE SURFACE AREA PER
REMARK 300 CHAIN BETWEEN THE ISOLATED CHAIN AND THAT FOR
REMARK 300 THE CHAIN IN THE COMPLEX IS    2203.4 ANGSTROM**2
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.   BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
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REMARK 350 BIOMOLECULE:   1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A, S
REMARK 350     BIOMT1   1  1.000000  0.000000  0.000000        0.00000
REMARK 350     BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350     BIOMT3   1 .0.000000  0.000000  1.000000        0.00000
REMARK 350     BIOMT1   2  0.000000 -1.000000  0.000000       86.16100
REMARK 350     BIOMT2   2 -1.000000  0.000000  0.000000       86.16100
REMARK 350     BIOMT3   2  0.000000  0.000000 -1.000000       73.32800
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465    M RES C SSSEQI
REMARK 465      MET A     1
REMARK 465      ALA A     2
REMARK 465      ALA A     3
REMARK 465      THR A     4
REMARK 465      ALA A     5
REMARK 465      ALA A     6
REMARK 465      GLU A     7
REMARK 465      ALA A     8
REMARK 465      VAL A     9
REMARK 465      ALA A    10
REMARK 465      SER A    11
REMARK 465      GLY A    12
REMARK 465      SER A    13
REMARK 465     .GLY A    14
REMARK 465      LYS A   304
REMARK 465      ARG A   305
REMARK 465      ILE A   306
REMARK 465      SER S   786
REMARK 465      MET S   787
REMARK 465      ASP S   788
REMARK 465      GLU S   789
REMARK 465      SER S   790
REMARK 465      GLY S   791
REMARK 465      LEU S   792
REMARK 465      PRO S   793
REMARK 465      GLN S   794
REMARK 465      GLN S   807
REMARK 465      GLY S   808
REMARK 465      SER S   809
REMARK 465      ARG S   810
REMARK 465      ASN S   811
REMARK 465      GLN S   824
REMARK 465      VAL S   825 .
REMARK 465      ASN S   826
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS (M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470    M RES CSSEQI   ATOMS
REMARK 470      GLU A  15     CG   CD   OE1  OE2
REMARK 470      GLU A  29     CG   CD   OE1  OE2
REMARK 470      ASN A  87     CG   OD1  ND2
REMARK 470      LYS A 106     CD   CE   NZ
REMARK 470      LYS A 115     CG   CD   CE   NZ
REMARK 470      ARG A 117     CG   CD   NE   CZ   NH1  NH2
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REMARK 470       GLN A 133    CG   CD   OE1  NE2
REMARK 470       GLN A 136    CG   CD   OE1  NE2
REMARK 470       GLN A 137    CG   CD   OE1  NE2
REMARK 470       ARG A 156    CG   CD   NE   CZ   NH1  NH2
REMARK 470       LYS A 157    CD   CE   NZ
REMARK 470       LYS A 311    CG   CD   CE   NZ
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   ATM2·  ATM3
REMARK 500    ASN A  84    N  -  CA  -  C    ANGL. DEV. =    9.3 DEGREES
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD AND BY MORE THAN 0.150 ANGSTROMS (M=MODEL
REMARK 500 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 500 NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,1X,2(A4,A1,3X),12X,F5.3)·
REMARK 500
REMARK 500 EXPECTED VALUESS: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1    RES CSSEQI ATM2    DEVIATION
REMARK 500    MET A 343  SD      MET A 343  CE     ·  -0.249
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI             DISTANCE
REMARK 500
REMARK 500  O    GLN A  209    O    HOH Z  108                    2.20
REMARK 525
REMARK 525 SOLVENT
REMARK 525
REMARK 525 THE SOLVENT MOLECULES ARE GIVEN CHAIN IDENTIFIERS TO
REMARK 525 INDICATE THE PROTEIN CHAIN TO WHICH THEY ARE MOST CLOSELY
REMARK 525 ASSOCIATED WITH:
REMARK 525    PROTEIN CHAIN  SOLVENT CHAIN
REMARK 525    A              Z
REMARK 525    S              H
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REMARK 525
REMARK 525 THE FOLLOWING SOLVENT MOLECULES LIE FARTHER THAN EXPECTED
REMARK 525 FROM THE PROTEIN OR NUCLEIC ACID MOLECULE AND MAY BE
REMARK 525 ASSOCIATED WITH A SYMMETRY RELATED MOLECULE (M=MODEL
REMARK 525 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 525 NUMBER; I=INSERTION CODE):
REMARK 525
REMARK 525 THESE MOLECULES CAN BE PLACED WITHIN 5.00 ANGSTROM OF THE
REMARK 525 OBSERVED OLIGOMER BY APPLYING THE SYMMETRY TRANSFORMATION
REMARK 525 INDICATED.
REMARK 525
REMARK 525 M RES CSSEQI   ORIGINAL COORDINATES   SYMMETRY TRANS.   DIST.
REMARK 525   X   Y   Z
REMARK 525 1 HOH W 531   12.359 41.757 15.368   005   545   2.38
REMARK 525 1 HOH W 609   10.971 45.216 18.991   005   545   3.25
REMARK 525 1 HOH W 576   42.075 52.163 47.994   008   665   2.28
REMARK 525 1 HOH W 687   28.879   5.577 12.106   005   555   2.82
REMARK 525 1 HOH W 674   24.396 12.792   8.360   005   555   3.20
REMARK 525 1 HOH W 543   27.797   7.178 14.664   005   555   2.83
REMARK 525 1 HOH W 607   26.874 53.406 28.524   008   665   2.97
REMARK 600
REMARK 600 HETEROGEN
REMARK 600
REMARK 600 FOR METAL ATOM FE   FE2 A1350   THE COORDINATION ANGLES ARE:
REMARK 600 1 HIS   199A NE2
REMARK 600 2 ASP   201A OD2   104.0
REMARK 600 3 HIS   279A NE2   85.8 88.0
REMARK 600 4 OGA   1351A O2   163.5 92.4 96.8
REMARK 600 5 OGA   1351A O2'   86.4 168.8 97.0 77.1
REMARK 600   1   2   3   4
REMARK 700
REMARK 700 SHEET
REMARK 700 THE SHEET STRUCTURE OF THIS MOLECULE IS BIFURCATED. IN
REMARK 700 ORDER TO REPRESENT THIS FEATURE IN THE SHEET RECORDS BELOW,
REMARK 700 TWO SHEETS ARE DEFINED.
REMARK 800
REMARK 800 SITE
REMARK 800 SITE_IDENTIFIER: FE1
REMARK 800 SITE_DESCRIPTION: FE BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: OGA
REMARK 800 SITE_DESCRIPTION: OGA BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SO1
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SO2
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1D7G   RELATED DB: PDB
REMARK 900 A MODEL FOR THE COMPLEX BETWEEN THE
REMARK 900 HYPOXIA-INDUCIBLE FACTOR-1 (HIF-1) AND ITS
REMARK 900   CONSENSUS DEOXYRIBONUCLEIC ACID SEQUENCE
REMARK 900 RELATED ID: 1H2L   RELATED DB: PDB
REMARK 900 FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900 WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2M   RELATED DB: PDB
REMARK 900 FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900 WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2N   RELATED DB: PDB

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REMARK 900    FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900    WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1L8C    RELATED DB: PDB
REMARK 900    STRUCTURAL BASIS FOR HIF-1ALPHA/CBP
REMARK 900    RECOGNITION IN THECELLULAR HYPOXIC RESPONSE
REMARK 900 RELATED ID: 1LM8    RELATED DB: PDB
REMARK 900    STRUCTURE OF A HIF-1A-PVHL-ELONGINB-
REMARK 900    ELONGINC COMPLEX
REMARK 900 RELATED ID: 1LQB    RELATED DB: PDB
REMARK 900    CRYSTAL STRUCTURE OF A HYDROXYLATED HIF-1
REMARK 900    ALPHA PEPTIDEBOUND TO THE PVHL/ELONGIN-C/
REMARK 900    ELONGIN-B COMPLEX
DBREF  1H2K A    1    349 SWS    Q969Q7   Q969Q7             1    349
DBREF  1H2K S  786    826 SWS    Q16665   HIFA_HUMAN       786    826
SEQRES   1 A  349  MET ALA ALA THR ALA ALA GLU ALA VAL ALA SER GLY SER
SEQRES   2 A  349  GLY GLU PRO ARG GLU GLU ALA GLY ALA LEU GLY PRO ALA
SEQRES   3 A  349  TRP ASP GLU SER GLN LEU ARG SER TYR SER PHE PRO THR
SEQRES   4 A  349  ARG PRO ILE PRO ARG LEU SER GLN SER ASP PRO ARG ALA
SEQRES   5 A  349  GLU GLU LEU ILE GLU ASN GLU GLU PRO VAL VAL LEU THR
SEQRES   6 A  349  ASP THR ASN LEU VAL TYR PRO ALA LEU LYS TRP ASP LEU
SEQRES   7 A  349  GLU TYR LEU GLN GLU ASN ILE GLY ASN GLY ASP PHE SER
SEQRES   8 A  349  VAL TYR SER ALA SER THR HIS LYS PHE LEU TYR TYR ASP
SEQRES   9 A  349  GLU LYS LYS MET ALA ASN PHE GLN ASN PHE LYS PRO ARG
SEQRES  10 A  349  SER ASN ARG GLU GLU MET LYS PHE HIS GLU PHE VAL GLU
SEQRES  11 A  349  LYS LEU GLN ASP ILE GLN GLN ARG GLY GLY GLU GLU ARG
SEQRES  12 A  349  LEU TYR LEU GLN GLN THR LEU ASN ASP THR VAL GLY ARG
SEQRES  13 A  349  LYS ILE VAL MET ASP PHE LEU GLY PHE ASN TRP ASN TRP
SEQRES  14 A  349  ILE ASN LYS GLN GLN GLY LYS ARG GLY TRP GLY GLN LEU
SEQRES  15 A  349  THR SER ASN LEU LEU LEU ILE GLY MET GLU GLY ASN VAL
SEQRES  16 A  349  THR PRO ALA HIS TYR ASP GLU GLN GLN ASN PHE PHE ALA
SEQRES  17 A  349  GLN ILE LYS GLY TYR LYS ARG CYS ILE LEU PHE PRO PRO
SEQRES  18 A  349  ASP GLN PHE GLU CYS LEU TYR PRO TYR PRO VAL HIS HIS
SEQRES  19 A  349  PRO CYS ASP ARG GLN SER GLN VAL ASP PHE ASP ASN PRO
SEQRES  20 A  349  ASP TYR GLU ARG PHE PRO ASN PHE GLN ASN VAL VAL GLY
SEQRES  21 A  349  TYR GLU THR VAL VAL GLY PRO GLY ASP VAL LEU TYR ILE
SEQRES  22 A  349  PRO MET TYR TRP TRP HIS HIS ILE GLU SER LEU LEU ASN
SEQRES  23 A  349  GLY GLY ILE THR ILE THR VAL ASN PHE TRP TYR LYS GLY
SEQRES  24 A  349  ALA PRO THR PRO LYS ARG ILE GLU TYR PRO LEU LYS ALA
SEQRES  25 A  349  HIS GLN LYS VAL ALA ILE MET ARG ASN ILE GLU LYS MET
SEQRES  26 A  349  LEU GLY GLU ALA LEU GLY ASN PRO GLN GLU VAL GLY PRO
SEQRES  27 A  349  LEU LEU ASN THR MET ILE LYS GLY ARG TYR ASN
SEQRES   1 S   41  SER MET ASP GLU SER GLY LEU PRO GLN LEU THR SER TYR
SEQRES   2 S   41  ASP CYS GLU VAL ASN ALA PRO ILE GLN GLY SER ARG ASN
SEQRES   3 S   41  LEU LEU GLN GLY GLU GLU LEU LEU ARG ALA LEU ASP GLN
SEQRES   4 S   41  VAL ASN
HET    FE2  A1350         1
HET    OGA  A1351        10
HET    SO4  A1352         5
HET    SO4  A1353         5
HETNAM     FE2 FE (II) ION
HETNAM     OGA N-OXALYOLGLYCINE
HETNAM     SO4 SULFATE ION
FORMUL   3 FE2    FE1 2+
FORMUL   4 OGA    C4 H5 N1 O5
FORMUL   5 SO4    2(O4 S1 2-)
FORMUL   6 HOH    *194(H2 O1)
HELIX    1   1 ASP A   28  LEU A   32 5                               5
HELIX    2   2 ASP A   49  ASN A   58 1                              10
HELIX    3   3 VAL A   70  TRP A   76 5                               7
HELIX    4   4 ASP A   77  ILE A   85 1                               9
HELIX    5   5 ASP A  104  GLN A  112 5                               9
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HELIX    6   6 LYS A  124  ARG A  138  1                                   15
HELIX    7   7 GLY A  155  GLY A  164  1                                   10
HELIX    8   8 ASN A  166  GLY A  178  1                                   13
HELIX    9   9 PRO A  220  ASP A  222  5                                    3
HELIX   10  10 GLN A  223  TYR A  228  1                                    6
HELIX   11  11 PHE A  252  VAL A  258  5                                    7
HELIX   12  12 LYS A  311  GLY A  331  1                                   21
HELIX   13  13 ASN A  332  GLN A  334  5                                    3
HELIX   14  14 GLU A  335  LYS A  345  1                                   11
HELIX   15  15 GLN S  814  ASP S  823  1                                   10
SHEET    1  AA 5 THR A  39  PRO A  41  0
SHEET    2  AA 5 GLY A 260  VAL A 265  1  O  GLY A 260   N  ARG A  40
SHEET    3  AA 5 LYS A 214  PHE A 219 -1  O  LYS A 214   N  VAL A 265
SHEET    4  AA 5 TRP A 278  SER A 283 -1  O  TRP A 278   N  PHE A 219
SHEET    5  AA 5 VAL A 195  HIS A 199 -1  O  THR A 196   N  ILE A 281
SHEET    1  AB 6 ARG A  44  LEU A  45  0
SHEET    2  AB 6 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AB 6 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AB 6 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AB 6 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AB 6 LEU A 182  SER A 184 -1  N  THR A 183   O  TRP A 296
SHEET    1  AC 9 ARG A  44  LEU A  45  0
SHEET    2  AC 9 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AC 9 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AC 9 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AC 9 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AC 9 LEU A 186  GLY A 190 -1  O  LEU A 186   N  ASN A 294
SHEET    7  AC 9 ARG A 143  THR A 149 -1  O  LEU A 146   N  ILE A 189
SHEET    8  AC 9 PHE A  90  ALA A  95 -1  O  SER A  91   N  GLN A 147
SHEET    9  AC 9 SER A 118  MET A 123 -1  O  ASN A 119   N  SER A  94
LINK        FE   FE2 A1350              NE2 HIS A 199      1555   1555  2.12
LINK        FE   FE2 A1350              OD2 ASP A 201      1555   1555  2.05
LINK        FE   FE2 A1350              NE2 HIS A 279      1555   1555  2.08
LINK        FE   FE2 A1350              O2  OGA A1351      1555   1555  2.13
LINK        FE   FE2 A1350              O2' OGA A1351      1555   1555  2.17
CISPEP   1 TYR A  308    PRO A  309       0        -1.09
SITE     1 FE1  3 HIS A 199  ASP A 201  HIS A 279
SITE     1 OGA 11 TYR A 145  THR A 196  HIS A 199  ASP A 201
SITE     2 OGA 11 ASN A 205  PHE A 207  LYS A 214  HIS A 279
SITE     3 OGA 11 ILE A 281  ASN A 294  TRP A 296
SITE     1 SO1  4 ARG A 138  GLY A 140  GLU A 141  GLU A 142
SITE     1 SO2  5 ARG A 143  GLU A 192  GLY A 193  LEU A 285
SITE     2 SO2  5 ASN A 286
CRYST1   86.161   86.161  146.656  90.00  90.00  90.00 P 41 21 2      8
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.011606  0.000000  0.000000        0.00000
SCALE2      0.000000  0.011606  0.000000        0.00000
SCALE3      0.000000  0.000000  0.006819        0.00000
ATOM     1  N   GLU A  15       8.429  32.653   9.844  1.00 50.99           N
ATOM     2  CA  GLU A  15       7.077  32.034   9.723  1.00 51.05           C
ATOM     3  C   GLU A  15       7.166  30.582  10.163  1.00 50.79           C
ATOM     4  O   GLU A  15       8.052  29.857   9.730  1.00 51.18           O
ATOM     5  CB  GLU A  15       6.570  32.124   8.296  1.00 51.20           C
ATOM     6  N   PRO A  16       6.254  30.150  11.022  1.00 50.50           N
ATOM     7  CA  PRO A  16       6.301  28.781  11.549  1.00 50.12           C
ATOM     8  C   PRO A  16       6.265  27.737  10.438  1.00 49.56           C
ATOM     9  O   PRO A  16       5.471  27.827   9.503  1.00 49.32           O
ATOM    10  CB  PRO A  16       5.049  28.701  12.429  1.00 50.27           C
ATOM    11  CG  PRO A  16       4.734  30.135  12.770  1.00 50.58           C
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ATOM	12	CD	PRO	A	16	5.108	30.911	11.548	1.00	50.56	C
ATOM	13	N	ARG	A	17	7.133	26.746	10.550	1.00	48.83	N
ATOM	14	CA	ARG	A	17	7.219	25.695	9.550	1.00	48.33	C
ATOM	15	C	ARG	A	17	5.967	24.832	9.561	1.00	47.48	C
ATOM	16	O	ARG	A	17	5.245	24.782	10.557	1.00	47.64	O
ATOM	17	CB	ARG	A	17	8.421	24.798	9.835	1.00	48.61	C
ATOM	18	CG	ARG	A	17	9.776	25.511	9.835	1.00	49.21	C
ATOM	19	CD	ARG	A	17	10.944	24.577	10.196	1.00	49.84	C
ATOM	20	NE	ARG	A	17	10.918	24.137	11.596	1.00	50.12	N
ATOM	21	CZ	ARG	A	17	11.455	24.809	12.623	1.00	50.99	C
ATOM	22	NH1	ARG	A	17	12.065	25.979	12.431	1.00	50.40	N
ATOM	23	NH2	ARG	A	17	11.381	24.310	13.857	1.00	50.81	N
ATOM	24	N	GLU	A	18	5.723	24.153	8.446	1.00	46.05	N
ATOM	25	CA	GLU	A	18	4.603	23.246	8.329	1.00	45.06	C
ATOM	26	C	GLU	A	18	5.096	21.830	8.607	1.00	44.00	C
ATOM	27	O	GLU	A	18	6.101	21.405	8.044	1.00	43.89	O
ATOM	28	CB	GLU	A	18	4.013	23.324	6.923	1.00	45.21	C
ATOM	29	CG	GLU	A	18	3.323	24.648	6.621	1.00	45.56	C
ATOM	30	CD	GLU	A	18	1.951	24.780	7.265	1.00	45.64	C
ATOM	31	OE1	GLU	A	18	1.342	23.749	7.641	1.00	44.14	O
ATOM	32	OE2	GLU	A	18	1.480	25.932	7.388	1.00	45.83	O
ATOM	33	N	GLU	A	19	4.396	21.113	9.484	1.00	42.49	N
ATOM	34	CA	GLU	A	19	4.734	19.728	9.795	1.00	41.55	C
ATOM	35	C	GLU	A	19	4.357	18.817	8.635	1.00	39.79	C
ATOM	36	O	GLU	A	19	3.266	18.933	8.066	1.00	39.13	O
ATOM	37	CB	GLU	A	19	4.010	19.256	11.052	1.00	41.88	C
ATOM	38	CG	GLU	A	19	4.420	19.997	12.311	1.00	44.80	C
ATOM	39	CD	GLU	A	19	4.276	19.155	13.574	1.00	49.28	C
ATOM	40	OE1	GLU	A	19	3.759	18.008	13.497	1.00	51.52	O
ATOM	41	OE2	GLU	A	19	4.695	19.643	14.656	1.00	52.76	O
ATOM	42	N	ALA	A	20	5.270	17.910	8.311	1.00	38.00	N
ATOM	43	CA	ALA	A	20	5.099	16.952	7.227	1.00	36.77	C
ATOM	44	C	ALA	A	20	3.803	16.168	7.373	1.00	35.56	C
ATOM	45	O	ALA	A	20	3.445	15.734	8.460	1.00	35.74	O
ATOM	46	CB	ALA	A	20	6.283	15.999	7.180	1.00	36.63	C
ATOM	47	N	GLY	A	21	3.082	16.020	6.279	1.00	34.05	N
ATOM	48	CA	GLY	A	21	1.860	15.242	6.307	1.00	33.24	C
ATOM	49	C	GLY	A	21	0.666	16.137	6.551	1.00	32.36	C
ATOM	50	O	GLY	A	21	-0.393	15.673	6.951	1.00	30.93	O
ATOM	51	N	ALA	A	22	0.867	17.432	6.323	1.00	32.41	N
ATOM	52	CA	ALA	A	22	-0.184	18.425	6.459	1.00	32.78	C
ATOM	53	C	ALA	A	22	-0.723	18.441	7.873	1.00	33.14	C
ATOM	54	O	ALA	A	22	-1.915	18.605	8.088	1.00	32.74	O
ATOM	55	CB	ALA	A	22	-1.304	18.139	5.462	1.00	32.61	C
ATOM	56	N	LEU	A	23	0.151	18.253	8.849	1.00	34.01	N
ATOM	57	CA	LEU	A	23	-0.297	18.275	10.232	1.00	34.91	C
ATOM	58	C	LEU	A	23	-0.342	19.694	10.757	1.00	35.27	C
ATOM	59	O	LEU	A	23	-0.528	19.918	11.943	1.00	35.72	O
ATOM	60	CB	LEU	A	23	0.565	17.366	11.097	1.00	35.27	C
ATOM	61	CG	LEU	A	23	0.384	15.910	10.653	1.00	36.36	C
ATOM	62	CD1	LEU	A	23	1.211	14.947	11.491	1.00	37.75	C
ATOM	63	CD2	LEU	A	23	-1.077	15.523	10.719	1.00	37.98	C
ATOM	64	N	GLY	A	24	-0.177	20.656	9.855	1.00	35.73	N
ATOM	65	CA	GLY	A	24	-0.332	22.053	10.194	1.00	35.66	C
ATOM	66	C	GLY	A	24	0.901	22.655	10.804	1.00	36.08	C
ATOM	67	O	GLY	A	24	1.945	22.001	10.913	1.00	36.05	O
ATOM	68	N	PRO	A	25	0.764	23.894	11.253	1.00	35.96	N
ATOM	69	CA	PRO	A	25	1.896	24.628	11.804	1.00	36.12	C
ATOM	70	C	PRO	A	25	2.327	23.980	13.108	1.00	36.32	C
ATOM	71	O	PRO	A	25	1.488	23.577	13.914	1.00	36.08	O
ATOM	72	CB	PRO	A	25	1.341	26.047	12.043	1.00	36.15	C

ATOM	73	CG	PRO	A	25	-0.162	25.942	11.982	1.00	35.84	C
ATOM	74	CD	PRO	A	25	-0.504	24.638	11.350	1.00	36.22	C
ATOM	75	N	ALA	A	26	3.632	23.848	13.285	1.00	36.64	N
ATOM	76	CA	ALA	A	26	4.178	23.274	14.499	1.00	37.19	C
ATOM	77	C	ALA	A	26	3.860	24.172	15.706	1.00	36.77	C
ATOM	78	O	ALA	A	26	3.595	23.678	16.808	1.00	37.19	O
ATOM	79	CB	ALA	A	26	5.672	23.099	14.347	1.00	37.52	C
ATOM	80	N	TRP	A	27	3.848	25.479	15.484	1.00	35.62	N
ATOM	81	CA	TRP	A	27	3.520	26.420	16.543	1.00	35.04	C
ATOM	82	C	TRP	A	27	3.029	27.729	15.933	1.00	34.20	C
ATOM	83	O	TRP	A	27	2.992	27.883	14.723	1.00	33.57	O
ATOM	84	CB	TRP	A	27	4.774	26.672	17.382	1.00	35.28	C
ATOM	85	CG	TRP	A	27	5.951	26.889	16.511	1.00	34.67	C
ATOM	86	CD1	TRP	A	27	6.761	25.930	15.955	1.00	35.52	C
ATOM	87	CD2	TRP	A	27	6.426	28.135	16.033	1.00	34.40	C
ATOM	88	NE1	TRP	A	27	7.723	26.522	15.172	1.00	35.09	N
ATOM	89	CE2	TRP	A	27	7.541	27.877	15.209	1.00	34.23	C
ATOM	90	CE3	TRP	A	27	6.038	29.452	16.232	1.00	34.31	C
ATOM	91	CZ2	TRP	A	27	8.255	28.879	14.592	1.00	35.79	C
ATOM	92	CZ3	TRP	A	27	6.750	30.442	15.629	1.00	36.35	C
ATOM	93	CH2	TRP	A	27	7.847	30.154	14.808	1.00	36.47	C
ATOM	94	N	ASP	A	28	2.638	28.672	16.766	1.00	33.77	N
ATOM	95	CA	ASP	A	28	2.259	29.970	16.249	1.00	33.48	C
ATOM	96	C	ASP	A	28	2.759	31.050	17.165	1.00	32.26	C
ATOM	97	O	ASP	A	28	3.210	30.791	18.276	1.00	32.05	O
ATOM	98	CB	ASP	A	28	0.749	30.080	16.037	1.00	34.30	C
ATOM	99	CG	ASP	A	28	-0.026	29.986	17.317	1.00	36.29	C
ATOM	100	OD1	ASP	A	28	-0.184	31.027	18.002	1.00	39.59	O
ATOM	101	OD2	ASP	A	28	-0.517	28.906	17.712	1.00	39.78	O
ATOM	102	N	GLU	A	29	2.691	32.268	16.654	1.00	31.30	N
ATOM	103	CA	GLU	A	29	3.181	33.465	17.326	1.00	30.15	C
ATOM	104	C	GLU	A	29	2.674	33.625	18.752	1.00	28.85	C
ATOM	105	O	GLU	A	29	3.407	34.036	19.621	1.00	28.58	O
ATOM	106	CB	GLU	A	29	2.791	34.682	16.503	1.00	30.32	C
ATOM	107	N	SER	A	30	1.414	33.313	18.992	1.00	27.95	N
ATOM	108	CA	SER	A	30	0.845	33.501	20.320	1.00	27.46	C
ATOM	109	C	SER	A	30	1.537	32.671	21.389	1.00	26.93	C
ATOM	110	O	SER	A	30	1.312	32.907	22.567	1.00	26.79	O
ATOM	111	CB	SER	A	30	-0.651	33.168	20.322	1.00	27.23	C
ATOM	112	OG	SER	A	30	-0.857	31.764	20.306	1.00	27.69	O
ATOM	113	N	GLN	A	31	2.360	31.703	20.984	1.00	26.55	N
ATOM	114	CA	GLN	A	31	3.071	30.837	21.926	1.00	26.63	C
ATOM	115	C	GLN	A	31	4.419	31.409	22.334	1.00	26.66	C
ATOM	116	O	GLN	A	31	5.078	30.855	23.205	1.00	26.45	O
ATOM	117	CB	GLN	A	31	3.282	29.426	21.349	1.00	26.41	C
ATOM	118	CG	GLN	A	31	1.998	28.637	21.131	1.00	26.28	C
ATOM	119	CD	GLN	A	31	2.245	27.287	20.489	1.00	26.25	C
ATOM	120	OE1	GLN	A	31	2.258	27.183	19.271	1.00	27.92	O
ATOM	121	NE2	GLN	A	31	2.465	26.258	21.305	1.00	24.36	N
ATOM	122	N	LEU	A	32	4.824	32.508	21.703	1.00	26.89	N
ATOM	123	CA	LEU	A	32	6.083	33.176	22.029	1.00	27.24	C
ATOM	124	C	LEU	A	32	5.852	34.321	23.006	1.00	26.92	C
ATOM	125	O	LEU	A	32	4.888	35.047	22.868	1.00	26.42	O
ATOM	126	CB	LEU	A	32	6.717	33.746	20.760	1.00	27.46	C
ATOM	127	CG	LEU	A	32	6.964	32.728	19.640	1.00	28.65	C
ATOM	128	CD1	LEU	A	32	7.630	33.391	18.452	1.00	29.44	C
ATOM	129	CD2	LEU	A	32	7.792	31.573	20.127	1.00	27.98	C
ATOM	130	N	ARG	A	33	6.728	34.472	23.995	1.00	26.71	N
ATOM	131	CA	ARG	A	33	6.627	35.596	24.923	1.00	26.77	C
ATOM	132	C	ARG	A	33	7.040	36.880	24.209	1.00	26.57	C
ATOM	133	O	ARG	A	33	7.719	36.844	23.203	1.00	26.30	O

ATOM	134	CB	ARG	A	33	7.492	35.357	26.163	1.00	26.67	C
ATOM	135	CG	ARG	A	33	7.052	34.141	26.983	1.00	26.29	C
ATOM	136	CD	ARG	A	33	7.937	33.837	28.181	1.00	25.85	C
ATOM	137	NE	ARG	A	33	7.381	32.778	29.018	1.00	25.80	N
ATOM	138	CZ	ARG	A	33	6.451	32.946	29.945	1.00	24.68	C
ATOM	139	NH1	ARG	A	33	5.937	34.140	30.189	1.00	23.50	N
ATOM	140	NH2	ARG	A	33	6.029	31.901	30.637	1.00	25.35	N
ATOM	141	N	SER	A	34	6.633	38.020	24.732	1.00	26.80	N
ATOM	142	CA	SER	A	34	6.903	39.280	24.061	1.00	27.15	C
ATOM	143	C	SER	A	34	7.990	40.048	24.791	1.00	26.39	C
ATOM	144	O	SER	A	34	7.964	40.140	26.005	1.00	25.87	O
ATOM	145	CB	SER	A	34	5.628	40.104	24.030	1.00	27.68	C
ATOM	146	OG	SER	A	34	5.494	40.737	25.285	1.00	32.47	O
ATOM	147	N	TYR	A	35	8.944	40.589	24.042	1.00	25.89	N
ATOM	148	CA	TYR	A	35	10.110	41.223	24.637	1.00	26.28	C
ATOM	149	C	TYR	A	35	10.353	42.558	23.970	1.00	26.85	C
ATOM	150	O	TYR	A	35	9.722	42.856	22.967	1.00	26.92	O
ATOM	151	CB	TYR	A	35	11.326	40.308	24.510	1.00	25.90	C
ATOM	152	CG	TYR	A	35	11.169	39.032	25.309	1.00	25.33	C
ATOM	153	CD1	TYR	A	35	10.975	39.073	26.685	1.00	24.99	C
ATOM	154	CD2	TYR	A	35	11.198	37.787	24.692	1.00	23.82	C
ATOM	155	CE1	TYR	A	35	10.823	37.898	27.429	1.00	24.56	C
ATOM	156	CE2	TYR	A	35	11.046	36.620	25.426	1.00	24.42	C
ATOM	157	CZ	TYR	A	35	10.862	36.682	26.793	1.00	23.48	C
ATOM	158	OH	TYR	A	35	10.696	35.524	27.513	1.00	24.75	O
ATOM	159	N	SER	A	36	11.304	43.327	24.496	1.00	27.27	N
ATOM	160	CA	SER	A	36	11.525	44.704	24.052	1.00	27.55	C
ATOM	161	C	SER	A	36	12.513	44.912	22.917	1.00	27.06	C
ATOM	162	O	SER	A	36	12.734	46.049	22.504	1.00	27.94	O
ATOM	163	CB	SER	A	36	12.082	45.498	25.226	1.00	27.88	C
ATOM	164	OG	SER	A	36	13.350	44.976	25.590	1.00	28.36	O
ATOM	165	N	PHE	A	37	13.128	43.851	22.429	1.00	25.35	N
ATOM	166	CA	PHE	A	37	14.202	44.014	21.461	1.00	24.62	C
ATOM	167	C	PHE	A	37	13.899	43.272	20.159	1.00	24.75	C
ATOM	168	O	PHE	A	37	13.130	42.335	20.135	1.00	24.25	O
ATOM	169	CB	PHE	A	37	15.487	43.462	22.071	1.00	23.87	C
ATOM	170	CG	PHE	A	37	15.318	42.069	22.635	1.00	22.53	C
ATOM	171	CD1	PHE	A	37	15.348	40.972	21.802	1.00	21.11	C
ATOM	172	CD2	PHE	A	37	15.069	41.872	23.988	1.00	21.63	C
ATOM	173	CE1	PHE	A	37	15.158	39.687	22.314	1.00	22.41	C
ATOM	174	CE2	PHE	A	37	14.900	40.612	24.505	1.00	22.29	C
ATOM	175	CZ	PHE	A	37	14.936	39.509	23.675	1.00	21.45	C
ATOM	176	N	PRO	A	38	14.489	43.715	19.067	1.00	24.94	N
ATOM	177	CA	PRO	A	38	14.322	43.017	17.793	1.00	24.67	C
ATOM	178	C	PRO	A	38	15.267	41.823	17.678	1.00	24.41	C
ATOM	179	O	PRO	A	38	16.249	41.745	18.427	1.00	23.73	O
ATOM	180	CB	PRO	A	38	14.725	44.072	16.783	1.00	24.75	C
ATOM	181	CG	PRO	A	38	15.791	44.872	17.530	1.00	26.09	C
ATOM	182	CD	PRO	A	38	15.287	44.950	18.941	1.00	25.27	C
ATOM	183	N	THR	A	39	14.981	40.927	16.734	1.00	23.30	N
ATOM	184	CA	THR	A	39	15.859	39.816	16.444	1.00	23.42	C
ATOM	185	C	THR	A	39	15.857	39.534	14.955	1.00	24.29	C
ATOM	186	O	THR	A	39	14.958	39.964	14.239	1.00	24.61	O
ATOM	187	CB	THR	A	39	15.368	38.538	17.135	1.00	23.09	C
ATOM	188	OG1	THR	A	39	14.044	38.232	16.680	1.00	19.92	O
ATOM	189	CG2	THR	A	39	15.213	38.731	18.641	1.00	23.03	C
ATOM	190	N	ARG	A	40	16.854	38.773	14.525	1.00	24.43	N
ATOM	191	CA	ARG	A	40	16.982	38.273	13.170	1.00	24.91	C
ATOM	192	C	ARG	A	40	17.061	36.751	13.268	1.00	24.49	C
ATOM	193	O	ARG	A	40	17.434	36.225	14.301	1.00	23.58	O
ATOM	194	CB	ARG	A	40	18.253	38.805	12.536	1.00	25.36	C

ATOM	195	CG	ARG A	40	18.208	40.281	12.248	1.00	30.74	C
ATOM	196	CD	ARG A	40	16.823	40.775	11.890	1.00	34.86	C
ATOM	197	NE	ARG A	40	16.604	40.989	10.477	1.00	39.38	N
ATOM	198	CZ	ARG A	40	15.403	41.229	9.971	1.00	43.86	C
ATOM	199	NH1	ARG A	40	14.345	41.254	10.782	1.00	45.88	N
ATOM	200	NH2	ARG A	40	15.252	41.457	8.674	1.00	44.96	N
ATOM	201	N	PRO A	41	16.687	36.031	12.221	1.00	25.08	N
ATOM	202	CA	PRO A	41	16.715	34.565	12.290	1.00	25.39	C
ATOM	203	C	PRO A	41	18.095	33.913	12.282	1.00	25.10	C
ATOM	204	O	PRO A	41	19.007	34.370	11.636	1.00	25.16	O
ATOM	205	CB	PRO A	41	15.953	34.130	11.023	1.00	25.76	C
ATOM	206	CG	PRO A	41	15.286	35.392	10.504	1.00	26.54	C
ATOM	207	CD	PRO A	41	16.151	36.524	10.939	1.00	24.85	C
ATOM	208	N	ILE A	42	18.225	32.823	13.020	1.00	25.28	N
ATOM	209	CA	ILE A	42	19.388	31.974	12.919	1.00	24.31	C
ATOM	210	C	ILE A	42	19.147	31.116	11.677	1.00	24.68	C
ATOM	211	O	ILE A	42	18.043	30.614	11.466	1.00	24.72	O
ATOM	212	CB	ILE A	42	19.481	31.104	14.163	1.00	24.80	C
ATOM	213	CG1	ILE A	42	19.763	31.993	15.384	1.00	24.24	C
ATOM	214	CG2	ILE A	42	20.530	30.004	13.961	1.00	23.81	C
ATOM	215	CD1	ILE A	42	19.531	31.325	16.729	1.00	23.59	C
ATOM	216	N	PRO A	43	20.146	30.953	10.826	1.00	24.48	N
ATOM	217	CA	PRO A	43	19.963	30.108	9.651	1.00	24.60	C
ATOM	218	C	PRO A	43	19.611	28.650	10.001	1.00	24.85	C
ATOM	219	O	PRO A	43	20.148	28.130	10.989	1.00	24.38	O
ATOM	220	CB	PRO A	43	21.320	30.192	8.937	1.00	24.87	C
ATOM	221	CG	PRO A	43	22.040	31.372	9.541	1.00	25.04	C
ATOM	222	CD	PRO A	43	21.475	31.583	10.886	1.00	24.37	C
ATOM	223	N	ARG A	44	18.686	28.032	9.248	1.00	24.70	N
ATOM	224	CA	ARG A	44	18.367	26.608	9.391	1.00	25.53	C
ATOM	225	C	ARG A	44	18.910	25.943	8.152	1.00	25.00	C
ATOM	226	O	ARG A	44	18.505	26.265	7.030	1.00	24.62	O
ATOM	227	CB	ARG A	44	16.873	26.287	9.452	1.00	26.51	C
ATOM	228	CG	ARG A	44	16.044	27.133	10.378	1.00	29.49	C
ATOM	229	CD	ARG A	44	14.683	26.485	10.813	1.00	31.03	C
ATOM	230	NE	ARG A	44	14.401	25.120	10.323	1.00	32.36	N
ATOM	231	CZ	ARG A	44	14.174	24.057	11.126	1.00	33.85	C
ATOM	232	NH1	ARG A	44	14.239	24.170	12.451	1.00	30.71	N
ATOM	233	NH2	ARG A	44	13.898	22.863	10.613	1.00	35.56	N
ATOM	234	N	LEU A	45	19.815	25.006	8.337	1.00	23.91	N
ATOM	235	CA	LEU A	45	20.500	24.444	7.202	1.00	23.40	C
ATOM	236	C	LEU A	45	20.684	22.967	7.352	1.00	23.52	C
ATOM	237	O	LEU A	45	20.559	22.423	8.446	1.00	22.50	O
ATOM	238	CB	LEU A	45	21.888	25.064	7.093	1.00	22.62	C
ATOM	239	CG	LEU A	45	21.911	26.563	6.819	1.00	23.96	C
ATOM	240	CD1	LEU A	45	23.317	27.111	6.947	1.00	24.52	C
ATOM	241	CD2	LEU A	45	21.366	26.845	5.423	1.00	24.63	C
ATOM	242	N	SER A	46	21.018	22.347	6.227	1.00	23.57	N
ATOM	243	CA	SER A	46	21.382	20.975	6.221	1.00	24.12	C
ATOM	244	C	SER A	46	22.820	20.888	6.668	1.00	24.81	C
ATOM	245	O	SER A	46	23.640	21.757	6.398	1.00	23.76	O
ATOM	246	CB	SER A	46	21.236	20.354	4.830	1.00	23.80	C
ATOM	247	OG	SER A	46	21.744	19.020	4.830	1.00	24.09	O
ATOM	248	N	GLN A	47	23.089	19.804	7.366	1.00	25.92	N
ATOM	249	CA	GLN A	47	24.399	19.444	7.844	1.00	27.25	C
ATOM	250	C	GLN A	47	25.379	19.326	6.674	1.00	27.54	C
ATOM	251	O	GLN A	47	26.563	19.564	6.836	1.00	27.97	O
ATOM	252	CB	GLN A	47	24.245	18.088	8.554	1.00	28.46	C
ATOM	253	CG	GLN A	47	25.487	17.279	8.705	1.00	31.10	C
ATOM	254	CD	GLN A	47	25.776	16.372	7.570	1.00	33.17	C
ATOM	255	OE1	GLN A	47	24.881	15.970	6.803	1.00	36.23	O

ATOM	256	NE2	GLN	A	47	27.041	16.000	7.458	1.00	36.17	N
ATOM	257	N	SER	A	48	24.884	18.951	5.498	1.00	27.72	N
ATOM	258	CA	SER	A	48	25.736	18.809	4.323	1.00	28.35	C
ATOM	259	C	SER	A	48	26.016	20.150	3.629	1.00	28.86	C
ATOM	260	O	SER	A	48	26.825	20.235	2.711	1.00	28.96	O
ATOM	261	CB	SER	A	48	25.092	17.839	3.324	1.00	28.65	C
ATOM	262	OG	SER	A	48	23.798	18.276	2.918	1.00	28.51	O
ATOM	263	N	ASP	A	49	25.347	21.203	4.065	1.00	29.16	N
ATOM	264	CA	ASP	A	49	25.515	22.496	3.442	1.00	29.28	C
ATOM	265	C	ASP	A	49	26.800	23.163	3.913	1.00	29.71	C
ATOM	266	O	ASP	A	49	26.981	23.398	5.101	1.00	29.02	O
ATOM	267	CB	ASP	A	49	24.325	23.369	3.783	1.00	29.35	C
ATOM	268	CG	ASP	A	49	24.316	24.667	3.010	1.00	29.93	C
ATOM	269	OD1	ASP	A	49	25.398	25.183	2.666	1.00	28.14	O
ATOM	270	OD2	ASP	A	49	23.259	25.247	2.731	1.00	30.49	O
ATOM	271	N	PRO	A	50	27.693	23.483	2.976	1.00	30.34	N
ATOM	272	CA	PRO	A	50	28.964	24.134	3.315	1.00	30.54	C
ATOM	273	C	PRO	A	50	28.783	25.354	4.186	1.00	30.38	C
ATOM	274	O	PRO	A	50	29.661	25.651	4.990	1.00	30.53	O
ATOM	275	CB	PRO	A	50	29.520	24.573	1.952	1.00	30.39	C
ATOM	276	CG	PRO	A	50	28.926	23.667	0.988	1.00	30.96	C
ATOM	277	CD	PRO	A	50	27.574	23.243	1.531	1.00	30.51	C
ATOM	278	N	ARG	A	51	27.683	26.072	4.008	1.00	30.50	N
ATOM	279	CA	ARG	A	51	27.439	27.253	4.817	1.00	30.94	C
ATOM	280	C	ARG	A	51	27.341	26.875	6.299	1.00	30.49	C
ATOM	281	O	ARG	A	51	27.744	27.646	7.161	1.00	29.74	O
ATOM	282	CB	ARG	A	51	26.171	27.979	4.370	1.00	30.97	C
ATOM	283	CG	ARG	A	51	26.337	28.781	3.099	1.00	33.47	C
ATOM	284	CD	ARG	A	51	25.029	29.321	2.521	1.00	34.80	C
ATOM	285	NE	ARG	A	51	24.071	28.252	2.221	1.00	36.68	N
ATOM	286	CZ	ARG	A	51	22.766	28.448	2.081	1.00	37.94	C
ATOM	287	NH1	ARG	A	51	22.260	29.677	2.208	1.00	39.10	N
ATOM	288	NH2	ARG	A	51	21.967	27.436	1.794	1.00	36.51	N
ATOM	289	N	ALA	A	52	26.831	25.684	6.596	1.00	30.03	N
ATOM	290	CA	ALA	A	52	26.697	25.288	7.993	1.00	29.96	C
ATOM	291	C	ALA	A	52	28.079	25.101	8.593	1.00	30.07	C
ATOM	292	O	ALA	A	52	28.345	25.518	9.710	1.00	29.00	O
ATOM	293	CB	ALA	A	52	25.901	24.028	8.119	1.00	29.81	C
ATOM	294	N	GLU	A	53	28.958	24.455	7.845	1.00	30.12	N
ATOM	295	CA	GLU	A	53	30.290	24.213	8.347	1.00	31.08	C
ATOM	296	C	GLU	A	53	30.999	25.550	8.579	1.00	30.37	C
ATOM	297	O	GLU	A	53	31.683	25.730	9.580	1.00	29.89	O
ATOM	298	CB	GLU	A	53	31.086	23.362	7.379	1.00	31.41	C
ATOM	299	CG	GLU	A	53	32.189	22.603	8.081	1.00	35.02	C
ATOM	300	CD	GLU	A	53	31.785	21.185	8.507	1.00	37.87	C
ATOM	301	OE1	GLU	A	53	30.614	20.929	8.887	1.00	39.16	O
ATOM	302	OE2	GLU	A	53	32.674	20.313	8.463	1.00	40.43	O
ATOM	303	N	GLU	A	54	30.811	26.479	7.652	1.00	29.84	N
ATOM	304	CA	GLU	A	54	31.413	27.796	7.757	1.00	30.22	C
ATOM	305	C	GLU	A	54	30.975	28.486	9.045	1.00	29.05	C
ATOM	306	O	GLU	A	54	31.780	29.102	9.719	1.00	28.03	O
ATOM	307	CB	GLU	A	54	31.026	28.680	6.573	1.00	30.53	C
ATOM	308	CG	GLU	A	54	31.635	28.276	5.243	1.00	34.66	C
ATOM	309	CD	GLU	A	54	30.993	29.002	4.058	1.00	38.49	C
ATOM	310	OE1	GLU	A	54	30.651	30.208	4.214	1.00	42.20	O
ATOM	311	OE2	GLU	A	54	30.829	28.368	2.975	1.00	41.54	O
ATOM	312	N	LEU	A	55	29.696	28.366	9.387	1.00	28.24	N
ATOM	313	CA	LEU	A	55	29.177	29.029	10.571	1.00	27.28	C
ATOM	314	C	LEU	A	55	29.774	28.448	11.827	1.00	26.43	C
ATOM	315	O	LEU	A	55	30.212	29.199	12.695	1.00	25.20	O
ATOM	316	CB	LEU	A	55	27.655	28.975	10.597	1.00	27.25	C

ATOM	317	CG	LEU	A	55	27.027	29.829	9.502	1.00	27.43	C
ATOM	318	CD1	LEU	A	55	25.568	29.452	9.322	1.00	28.83	C
ATOM	319	CD2	LEU	A	55	27.173	31.318	9.821	1.00	26.98	C
ATOM	320	N	ILE	A	56	29.829	27.116	11.915	1.00	25.75	N
ATOM	321	CA	ILE	A	56	30.382	26.473	13.107	1.00	25.50	C
ATOM	322	C	ILE	A	56	31.874	26.815	13.254	1.00	26.26	C
ATOM	323	O	ILE	A	56	32.346	27.134	14.349	1.00	25.55	O
ATOM	324	CB	ILE	A	56	30.192	24.955	13.059	1.00	25.63	C
ATOM	325	CG1	ILE	A	56	28.698	24.574	13.034	1.00	24.00	C
ATOM	326	CG2	ILE	A	56	30.848	24.321	14.263	1.00	25.48	C
ATOM	327	CD1	ILE	A	56	28.439	23.170	12.531	1.00	24.10	C
ATOM	328	N	GLU	A	57	32.597	26.781	12.135	1.00	27.04	N
ATOM	329	CA	GLU	A	57	34.023	27.082	12.107	1.00	28.01	C
ATOM	330	C	GLU	A	57	34.232	28.491	12.625	1.00	28.49	C
ATOM	331	O	GLU	A	57	35.183	28.770	13.344	1.00	28.92	O
ATOM	332	CB	GLU	A	57	34.561	26.977	10.676	1.00	28.61	C
ATOM	333	CG	GLU	A	57	36.053	27.224	10.509	1.00	30.77	C
ATOM	334	CD	GLU	A	57	36.902	26.322	11.394	1.00	35.15	C
ATOM	335	OE1	GLU	A	57	36.556	25.127	11.591	1.00	37.11	O
ATOM	336	OE2	GLU	A	57	37.924	26.818	11.909	1.00	40.88	O
ATOM	337	N	ASN	A	58	33.321	29.378	12.270	1.00	28.34	N
ATOM	338	CA	ASN	A	58	33.424	30.758	12.701	1.00	28.81	C
ATOM	339	C	ASN	A	58	32.770	31.079	14.025	1.00	27.23	C
ATOM	340	O	ASN	A	58	32.630	32.233	14.374	1.00	26.07	O
ATOM	341	CB	ASN	A	58	32.792	31.641	11.656	1.00	29.66	C
ATOM	342	CG	ASN	A	58	33.789	32.386	10.913	1.00	33.61	C
ATOM	343	OD1	ASN	A	58	34.280	31.901	9.893	1.00	38.81	O
ATOM	344	ND2	ASN	A	58	34.160	33.582	11.429	1.00	36.72	N
ATOM	345	N	GLU	A	59	32.343	30.053	14.735	1.00	26.39	N
ATOM	346	CA	GLU	A	59	31.712	30.241	16.030	1.00	26.36	C
ATOM	347	C	GLU	A	59	30.495	31.144	15.926	1.00	25.39	C
ATOM	348	O	GLU	A	59	30.325	32.100	16.668	1.00	24.14	O
ATOM	349	CB	GLU	A	59	32.753	30.697	17.059	1.00	26.80	C
ATOM	350	CG	GLU	A	59	33.717	29.537	17.316	1.00	29.10	C
ATOM	351	CD	GLU	A	59	34.722	29.791	18.407	1.00	32.85	C
ATOM	352	OE1	GLU	A	59	35.790	30.330	18.080	1.00	37.47	O
ATOM	353	OE2	GLU	A	59	34.466	29.432	19.572	1.00	34.14	O
ATOM	354	N	GLU	A	60	29.641	30.799	14.970	1.00	24.88	N
ATOM	355	CA	GLU	A	60	28.366	31.465	14.801	1.00	25.20	C
ATOM	356	C	GLU	A	60	27.262	30.414	14.822	1.00	24.07	C
ATOM	357	O	GLU	A	60	27.420	29.320	14.293	1.00	22.49	O
ATOM	358	CB	GLU	A	60	28.343	32.249	13.505	1.00	25.69	C
ATOM	359	CG	GLU	A	60	29.354	33.363	13.536	1.00	30.40	C
ATOM	360	CD	GLU	A	60	28.962	34.516	12.657	1.00	37.91	C
ATOM	361	OE1	GLU	A	60	29.009	34.377	11.414	1.00	38.24	O
ATOM	362	OE2	GLU	A	60	28.595	35.566	13.236	1.00	46.50	O
ATOM	363	N	PRO	A	61	26.124	30.779	15.386	1.00	22.90	N
ATOM	364	CA	PRO	A	61	25.045	29.816	15.571	1.00	22.19	C
ATOM	365	C	PRO	A	61	24.448	29.371	14.267	1.00	21.47	C
ATOM	366	O	PRO	A	61	24.419	30.104	13.266	1.00	20.48	O
ATOM	367	CB	PRO	A	61	23.996	30.583	16.368	1.00	22.29	C
ATOM	368	CG	PRO	A	61	24.315	32.053	16.148	1.00	22.67	C
ATOM	369	CD	PRO	A	61	25.764	32.140	15.798	1.00	22.92	C
ATOM	370	N	VAL	A	62	23.957	28.142	14.283	1.00	20.87	N
ATOM	371	CA	VAL	A	62	23.248	27.591	13.146	1.00	20.94	C
ATOM	372	C	VAL	A	62	22.353	26.475	13.655	1.00	21.15	C
ATOM	373	O	VAL	A	62	22.714	25.761	14.605	1.00	21.21	O
ATOM	374	CB	VAL	A	62	24.214	27.052	12.073	1.00	21.30	C
ATOM	375	CG1	VAL	A	62	25.061	25.912	12.608	1.00	22.10	C
ATOM	376	CG2	VAL	A	62	23.440	26.587	10.825	1.00	21.19	C
ATOM	377	N	VAL	A	63	21.158	26.366	13.084	1.00	21.48	N

ATOM	378	CA	VAL	A	63	20.302	25.231	13.374	1.00	21.87	C
ATOM	379	C	VAL	A	63	20.526	24.212	12.270	1.00	22.00	C
ATOM	380	O	VAL	A	63	20.366	24.528	11.109	1.00	22.54	O
ATOM	381	CB	VAL	A	63	18.793	25.574	13.421	1.00	22.02	C
ATOM	382	CG1	VAL	A	63	17.955	24.277	13.612	1.00	21.90	C
ATOM	383	CG2	VAL	A	63	18.494	26.522	14.546	1.00	21.22	C
ATOM	384	N	LEU	A	64	20.911	23.002	12.643	1.00	22.48	N
ATOM	385	CA	LEU	A	64	21.067	21.902	11.710	1.00	23.08	C
ATOM	386	C	LEU	A	64	19.826	21.014	11.775	1.00	22.19	C
ATOM	387	O	LEU	A	64	19.423	20.558	12.843	1.00	21.85	O
ATOM	388	CB	LEU	A	64	22.327	21.107	12.032	1.00	24.00	C
ATOM	389	CG	LEU	A	64	23.614	21.930	11.984	1.00	27.02	C
ATOM	390	CD1	LEU	A	64	24.791	21.080	12.303	1.00	31.61	C
ATOM	391	CD2	LEU	A	64	23.827	22.540	10.640	1.00	29.86	C
ATOM	392	N	THR	A	65	19.222	20.757	10.628	1.00	21.50	N
ATOM	393	CA	THR	A	65	17.943	20.056	10.613	1.00	21.95	C
ATOM	394	C	THR	A	65	18.022	18.561	10.389	1.00	21.35	C
ATOM	395	O	THR	A	65	17.028	17.870	10.581	1.00	21.37	O
ATOM	396	CB	THR	A	65	17.062	20.592	9.478	1.00	22.08	C
ATOM	397	OG1	THR	A	65	17.725	20.351	8.230	1.00	22.38	O
ATOM	398	CG2	THR	A	65	16.919	22.099	9.553	1.00	24.00	C
ATOM	399	N	ASP	A	66	19.168	18.062	9.961	1.00	21.50	N
ATOM	400	CA	ASP	A	66	19.259	16.650	9.604	1.00	21.86	C
ATOM	401	C	ASP	A	66	20.513	15.899	10.069	1.00	21.61	C
ATOM	402	O	ASP	A	66	21.070	15.088	9.316	1.00	21.82	O
ATOM	403	CB	ASP	A	66	19.152	16.553	8.084	1.00	22.20	C
ATOM	404	CG	ASP	A	66	20.199	17.355	7.390	1.00	21.49	C
ATOM	405	OD1	ASP	A	66	21.065	17.936	8.070	1.00	21.14	O
ATOM	406	OD2	ASP	A	66	20.240	17.477	6.159	1.00	25.40	O
ATOM	407	N	THR	A	67	20.967	16.158	11.287	1.00	21.05	N
ATOM	408	CA	THR	A	67	22.154	15.491	11.768	1.00	20.85	C
ATOM	409	C	THR	A	67	21.858	14.084	12.231	1.00	20.12	C
ATOM	410	O	THR	A	67	22.757	13.281	12.283	1.00	20.45	O
ATOM	411	CB	THR	A	67	22.747	16.207	12.977	1.00	20.77	C
ATOM	412	OG1	THR	A	67	21.782	16.210	14.039	1.00	20.61	O
ATOM	413	CG2	THR	A	67	23.054	17.671	12.682	1.00	22.44	C
ATOM	414	N	ASN	A	68	20.614	13.815	12.618	1.00	19.51	N
ATOM	415	CA	ASN	A	68	20.269	12.555	13.267	1.00	19.09	C
ATOM	416	C	ASN	A	68	21.116	12.349	14.517	1.00	18.40	C
ATOM	417	O	ASN	A	68	21.383	11.212	14.928	1.00	17.67	O
ATOM	418	CB	ASN	A	68	20.455	11.362	12.325	1.00	19.63	C
ATOM	419	CG	ASN	A	68	19.453	11.344	11.209	1.00	19.93	C
ATOM	420	OD1	ASN	A	68	18.253	11.236	11.442	1.00	19.76	O
ATOM	421	ND2	ASN	A	68	19.941	11.423	9.987	1.00	19.96	N
ATOM	422	N	LEU	A	69	21.532	13.448	15.134	1.00	18.28	N
ATOM	423	CA	LEU	A	69	22.378	13.382	16.326	1.00	17.98	C
ATOM	424	C	LEU	A	69	21.773	12.542	17.447	1.00	17.59	C
ATOM	425	O	LEU	A	69	22.478	11.725	18.039	1.00	17.61	O
ATOM	426	CB	LEU	A	69	22.693	14.772	16.844	1.00	18.38	C
ATOM	427	CG	LEU	A	69	23.636	14.859	18.035	1.00	18.31	C
ATOM	428	CD1	LEU	A	69	24.936	14.144	17.744	1.00	20.68	C
ATOM	429	CD2	LEU	A	69	23.907	16.299	18.399	1.00	19.25	C
ATOM	430	N	VAL	A	70	20.489	12.741	17.740	1.00	17.27	N
ATOM	431	CA	VAL	A	70	19.811	11.989	18.794	1.00	17.72	C
ATOM	432	C	VAL	A	70	18.588	11.253	18.257	1.00	18.11	C
ATOM	433	O	VAL	A	70	17.557	11.148	18.927	1.00	17.23	O
ATOM	434	CB	VAL	A	70	19.395	12.866	19.999	1.00	17.54	C
ATOM	435	CG1	VAL	A	70	20.624	13.402	20.704	1.00	19.07	C
ATOM	436	CG2	VAL	A	70	18.451	13.994	19.599	1.00	17.50	C
ATOM	437	N	TYR	A	71	18.715	10.764	17.028	1.00	19.22	N
ATOM	438	CA	TYR	A	71	17.615	10.071	16.367	1.00	19.79	C

.TOM	439	C	TYR	A	71	16.934	9.072	17.306	1.00	19.62	C
.TOM	440	O	TYR	A	71	15.726	9.120	17.457	1.00	18.64	O
.TOM	441	CB	TYR	A	71	18.082	9.406	15.055	1.00	20.19	C
.TOM	442	CG	TYR	A	71	17.156	8.320	14.554	1.00	22.29	C
.T	443	CD1	TYR	A	71	15.938	8.619	13.948	1.00	25.33	C
.TOM	444	CD2	TYR	A	71	17.503	6.986	14.691	1.00	23.31	C
.TOM	445	CE1	TYR	A	71	15.080	7.555	13.480	1.00	24.74	C
.TOM	446	CE2	TYR	A	71	16.684	5.968	14.252	1.00	23.57	C
.TOM	447	CZ	TYR	A	71	15.479	6.244	13.650	1.00	24.07	C
.TOM	448	OH	TYR	A	71	14.686	5.159	13.266	1.00	27.86	O
.TOM	449	N	PRO	A	72	17.688	8.200	17.960	1.00	20.27	N
.TOM	450	CA	PRO	A	72	17.074	7.196	18.840	1.00	21.30	C
.TOM	451	C	PRO	A	72	16.307	7.794	20.008	1.00	21.82	C
.TOM	452	O	PRO	A	72	15.463	7.120	20.535	1.00	21.13	O
.TOM	453	CB	PRO	A	72	18.267	6.377	19.351	1.00	21.33	C
.TOM	454	CG	PRO	A	72	19.362	6.650	18.386	1.00	21.75	C
.TOM	455	CD	PRO	A	72	19.151	8.065	17.905	1.00	20.71	C
.TOM	456	N	ALA	A	73	16.588	9.038	20.391	1.00	22.47	N
.TOM	457	CA	ALA	A	73	15.892	9.658	21.522	1.00	23.20	C
.TOM	458	C	ALA	A	73	14.567	10.293	21.103	1.00	23.47	C
.TOM	459	O	ALA	A	73	13.801	10.765	21.938	1.00	23.46	O
.TOM	460	CB	ALA	A	73	16.783	10.718	22.173	1.00	23.27	C
.TOM	461	N	LEU	A	74	14.297	10.322	19.808	1.00	23.79	N
.TOM	462	CA	LEU	A	74	13.086	10.967	19.329	1.00	24.10	C
.TOM	463	C	LEU	A	74	11.797	10.301	19.801	1.00	24.55	C
.TOM	464	O	LEU	A	74	10.732	10.903	19.746	1.00	23.83	O
.TOM	465	CB	LEU	A	74	13.114	11.076	17.810	1.00	24.16	C
.TOM	466	CG	LEU	A	74	14.185	12.061	17.296	1.00	24.67	C
.TOM	467	CD1	LEU	A	74	13.988	12.320	15.820	1.00	26.73	C
.TOM	468	CD2	LEU	A	74	14.225	13.371	18.077	1.00	23.39	C
.TOM	469	N	LYS	A	75	11.897	9.053	20.244	1.00	24.97	N
.TOM	470	CA	LYS	A	75	10.741	8.317	20.738	1.00	25.16	C
.TOM	471	C	LYS	A	75	10.589	8.519	22.245	1.00	25.37	C
.TOM	472	O	LYS	A	75	9.612	8.082	22.822	1.00	25.23	O
.TOM	473	CB	LYS	A	75	10.885	6.819	20.428	1.00	25.16	C
.TOM	474	CG	LYS	A	75	12.079	6.163	21.097	1.00	25.17	C
.TOM	475	CD	LYS	A	75	12.178	4.653	20.765	1.00	27.19	C
.TOM	476	CE	LYS	A	75	13.646	4.220	20.609	1.00	26.95	C
.TOM	477	NZ	LYS	A	75	14.348	4.123	21.868	1.00	26.22	N
.TOM	478	N	TRP	A	76	11.552	9.179	22.882	1.00	25.25	N
.TOM	479	CA	TRP	A	76	11.486	9.389	24.319	1.00	25.56	C
.TOM	480	C	TRP	A	76	10.268	10.201	24.749	1.00	26.35	C
TOM	481	O	TRP	A	76	9.920	11.198	24.130	1.00	26.71	O
TOM	482	CB	TRP	A	76	12.719	10.139	24.816	1.00	25.19	C
TOM	483	CG	TRP	A	76	13.975	9.338	24.816	1.00	24.32	C
TOM	484	CD1	TRP	A	76	14.129	8.059	24.393	1.00	22.72	C
TOM	485	CD2	TRP	A	76	15.258	9.762	25.271	1.00	22.34	C
TOM	486	NE1	TRP	A	76	15.431	7.658	24.552	1.00	20.61	N
TOM	487	CE2	TRP	A	76	16.145	8.685	25.096	1.00	20.28	C
TOM	488	CE3	TRP	A	76	15.750	10.944	25.817	1.00	22.65	C
TOM	489	CZ2	TRP	A	76	17.481	8.756	25.437	1.00	20.18	C
TOM	490	CZ3	TRP	A	76	17.088	11.012	26.163	1.00	21.43	C
TOM	491	CH2	TRP	A	76	17.932	9.934	25.970	1.00	21.94	C
TOM	492	N	ASP	A	77	9.643	9.772	25.836	1.00	26.46	N
TOM	493	CA	ASP	A	77	8.583	10.530	26.467	1.00	26.47	C
TOM	494	C	ASP	A	77	8.618	10.116	27.931	1.00	26.16	C
TOM	495	O	ASP	A	77	9.405	9.264	28.291	1.00	26.44	O
TOM	496	CB	ASP	A	77	7.230	10.276	25.810	1.00	26.51	C
TOM	497	CG	ASP	A	77	6.795	8.835	25.885	1.00	27.32	C
TOM	498	OD1	ASP	A	77	7.388	8.015	26.638	1.00	26.02	O
TOM	499	OD2	ASP	A	77	5.832	8.439	25.211	1.00	29.97	O

ATOM	500	N	LEU A	78	7.790	10.705	28.775	1.00	25.96	N
ATOM	501	CA	LEU A	78	7.893	10.441	30.201	1.00	26.27	C
ATOM	502	C	LEU A	78	7.716	8.965	30.539	1.00	26.14	C
ATOM	503	O	LEU A	78	8.446	8.438	31.374	1.00	25.51	O
ATOM	504	CB	LEU A	78	6.905	11.301	30.979	1.00	26.32	C
ATOM	505	CG	LEU A	78	7.155	12.802	30.860	1.00	27.35	C
ATOM	506	CD1	LEU A	78	6.098	13.579	31.623	1.00	28.05	C
ATOM	507	CD2	LEU A	78	8.536	13.165	31.379	1.00	28.39	C
ATOM	508	N	GLU A	79	6.775	8.297	29.874	1.00	26.56	N
ATOM	509	CA	GLU A	79	6.526	6.876	30.123	1.00	27.00	C
ATOM	510	C	GLU A	79	7.754	6.029	29.780	1.00	26.63	C
ATOM	511	O	GLU A	79	8.220	5.231	30.583	1.00	25.94	O
ATOM	512	CB	GLU A	79	5.302	6.371	29.333	1.00	27.39	C
ATOM	513	CG	GLU A	79	4.963	4.919	29.657	1.00	29.75	C
ATOM	514	CD	GLU A	79	3.803	4.347	28.854	1.00	33.15	C
ATOM	515	OE1	GLU A	79	3.361	4.976	27.863	1.00	35.39	O
ATOM	516	OE2	GLU A	79	3.338	3.245	29.224	1.00	35.44	O
ATOM	517	N	TYR A	80	8.279	6.205	28.575	1.00	26.53	N
ATOM	518	CA	TYR A	80	9.466	5.465	28.169	1.00	26.29	C
ATOM	519	C	TYR A	80	10.669	5.763	29.072	1.00	25.83	C
ATOM	520	O	TYR A	80	11.418	4.863	29.435	1.00	25.75	O
ATOM	521	CB	TYR A	80	9.812	5.802	26.728	1.00	26.53	C
ATOM	522	CG	TYR A	80	11.047	5.106	26.210	1.00	26.94	C
ATOM	523	CD1	TYR A	80	10.971	3.836	25.637	1.00	26.53	C
ATOM	524	CD2	TYR A	80	12.287	5.721	26.291	1.00	25.32	C
ATOM	525	CE1	TYR A	80	12.113	3.208	25.142	1.00	26.28	C
ATOM	526	CE2	TYR A	80	13.416	5.109	25.823	1.00	25.73	C
ATOM	527	CZ	TYR A	80	13.331	3.861	25.240	1.00	25.94	C
ATOM	528	OH	TYR A	80	14.478	3.294	24.758	1.00	25.55	O
ATOM	529	N	LEU A	81	10.859	7.016	29.448	1.00	25.62	N
ATOM	530	CA	LEU A	81	12.000	7.350	30.309	1.00	25.87	C
ATOM	531	C	LEU A	81	11.821	6.794	31.733	1.00	26.06	C
ATOM	532	O	LEU A	81	12.763	6.263	32.327	1.00	26.00	O
ATOM	533	CB	LEU A	81	12.250	8.863	30.340	1.00	25.81	C
ATOM	534	CG	LEU A	81	12.748	9.501	29.030	1.00	25.65	C
ATOM	535	CD1	LEU A	81	12.828	11.010	29.174	1.00	26.40	C
ATOM	536	CD2	LEU A	81	14.102	8.959	28.592	1.00	25.79	C
ATOM	537	N	GLN A	82	10.617	6.913	32.274	1.00	26.27	N
ATOM	538	CA	GLN A	82	10.338	6.388	33.602	1.00	26.77	C
ATOM	539	C	GLN A	82	10.640	4.897	33.623	1.00	26.51	C
ATOM	540	O	GLN A	82	11.232	4.384	34.552	1.00	26.60	O
ATOM	541	CB	GLN A	82	8.877	6.611	33.974	1.00	26.90	C
ATOM	542	CG	GLN A	82	8.466	5.856	35.236	1.00	28.41	C
ATOM	543	CD	GLN A	82	7.315	6.501	35.987	1.00	30.63	C
ATOM	544	OE1	GLN A	82	6.755	7.501	35.551	1.00	32.13	O
ATOM	545	NE2	GLN A	82	6.944	5.907	37.116	1.00	34.12	N
ATOM	546	N	GLU A	83	10.252	4.216	32.561	1.00	26.68	N
ATOM	547	CA	GLU A	83	10.429	2.773	32.456	1.00	26.90	C
ATOM	548	C	GLU A	83	11.893	2.359	32.295	1.00	26.42	C
ATOM	549	O	GLU A	83	12.285	1.294	32.764	1.00	25.50	O
ATOM	550	CB	GLU A	83	9.604	2.257	31.273	1.00	29.20	C
ATOM	551	CG	GLU A	83	9.607	0.753	31.080	1.00	31.92	C
ATOM	552	CD	GLU A	83	8.902	0.014	32.205	1.00	34.06	C
ATOM	553	OE1	GLU A	83	8.258	0.666	33.060	1.00	34.06	O
ATOM	554	OE2	GLU A	83	9.008	-1.221	32.243	1.00	33.78	O
ATOM	555	N	ASN A	84	12.711	3.223	31.700	1.00	25.79	N
ATOM	556	CA	ASN A	84	14.063	2.824	31.312	1.00	25.87	C
ATOM	557	C	ASN A	84	15.273	3.607	31.810	1.00	26.08	C
ATOM	558	O	ASN A	84	16.392	3.138	31.628	1.00	26.05	O
ATOM	559	CB	ASN A	84	14.137	2.844	29.784	1.00	25.74	C
ATOM	560	CG	ASN A	84	13.262	1.799	29.152	1.00	25.67	C

ATOM	561	OD1	ASN	A	84	13.402	0.608	29.439	1.00	24.26	O
ATOM	562	ND2	ASN	A	84	12.354	2.231	28.288	1.00	22.66	N
ATOM	563	N	ILE	A	85	15.087	4.773	32.422	1.00	26.02	N
ATOM	564	CA	ILE	A	85	16.240	5.599	32.763	1.00	26.74	C
ATOM	565	C	ILE	A	85	16.930	5.307	34.099	1.00	26.89	C
ATOM	566	O	ILE	A	85	17.820	6.054	34.519	1.00	26.93	O
ATOM	567	CB	ILE	A	85	15.846	7.076	32.688	1.00	26.70	C
ATOM	568	CG1	ILE	A	85	17.049	7.923	32.270	1.00	27.99	C
ATOM	569	CG2	ILE	A	85	15.232	7.535	33.988	1.00	26.50	C
ATOM	570	CD1	ILE	A	85	16.696	9.389	32.000	1.00	28.77	C
ATOM	571	N	GLY	A	86	16.503	4.253	34.773	1.00	27.27	N
ATOM	572	CA	GLY	A	86	17.130	3.834	36.018	1.00	27.51	C
ATOM	573	C	GLY	A	86	16.573	4.453	37.289	1.00	27.73	C
ATOM	574	O	GLY	A	86	15.563	5.163	37.268	1.00	27.80	O
ATOM	575	N	ASN	A	87	17.273	4.186	38.392	1.00	27.70	N
ATOM	576	CA	ASN	A	87	16.864	4.603	39.726	1.00	27.53	C
ATOM	577	C	ASN	A	87	17.849	5.602	40.320	1.00	27.33	C
ATOM	578	O	ASN	A	87	17.932	5.762	41.539	1.00	26.97	O
ATOM	579	CB	ASN	A	87	16.726	3.367	40.644	1.00	27.60	C
ATOM	580	N	GLY	A	88	18.601	6.273	39.455	1.00	27.41	N
ATOM	581	CA	GLY	A	88	19.528	7.307	39.888	1.00	27.29	C
ATOM	582	C	GLY	A	88	18.762	8.549	40.288	1.00	27.18	C
ATOM	583	O	GLY	A	88	17.570	8.654	40.001	1.00	27.43	O
ATOM	584	N	ASP	A	89	19.437	9.489	40.945	1.00	27.04	N
ATOM	585	CA	ASP	A	89	18.808	10.739	41.366	1.00	26.88	C
ATOM	586	C	ASP	A	89	18.761	11.755	40.227	1.00	26.69	C
ATOM	587	O	ASP	A	89	19.697	11.848	39.446	1.00	26.91	O
ATOM	588	CB	ASP	A	89	19.596	11.372	42.504	1.00	26.95	C
ATOM	589	CG	ASP	A	89	19.375	10.688	43.834	1.00	27.28	C
ATOM	590	OD1	ASP	A	89	18.499	9.811	43.939	1.00	29.31	O
ATOM	591	OD2	ASP	A	89	20.040	10.983	44.839	1.00	27.32	O
ATOM	592	N	PHE	A	90	17.687	12.531	40.152	1.00	26.24	N
ATOM	593	CA	PHE	A	90	17.598	13.594	39.165	1.00	26.10	C
ATOM	594	C	PHE	A	90	17.407	14.931	39.866	1.00	26.23	C
ATOM	595	O	PHE	A	90	16.629	15.037	40.811	1.00	26.48	O
ATOM	596	CB	PHE	A	90	16.460	13.322	38.184	1.00	25.91	C
ATOM	597	CG	PHE	A	90	16.747	12.201	37.241	1.00	25.26	C
ATOM	598	CD1	PHE	A	90	16.601	10.886	37.640	1.00	25.32	C
ATOM	599	CD2	PHE	A	90	17.190	12.459	35.958	1.00	26.02	C
ATOM	600	CE1	PHE	A	90	16.872	9.856	36.777	1.00	24.09	C
ATOM	601	CE2	PHE	A	90	17.460	11.427	35.091	1.00	25.07	C
ATOM	602	CZ	PHE	A	90	17.308	10.117	35.512	1.00	24.67	C
ATOM	603	N	SER	A	91	18.149	15.941	39.430	1.00	26.33	N
ATOM	604	CA	SER	A	91	17.985	17.280	39.973	1.00	26.48	C
ATOM	605	C	SER	A	91	16.777	17.923	39.310	1.00	26.71	C
ATOM	606	O	SER	A	91	16.696	18.029	38.077	1.00	26.09	O
ATOM	607	CB	SER	A	91	19.226	18.152	39.763	1.00	26.25	C
ATOM	608	OG	SER	A	91	20.364	17.543	40.326	1.00	26.61	O
ATOM	609	N	VAL	A	92	15.835	18.327	40.150	1.00	27.06	N
ATOM	610	CA	VAL	A	92	14.629	18.971	39.695	1.00	27.44	C
ATOM	611	C	VAL	A	92	14.468	20.295	40.405	1.00	27.57	C
ATOM	612	O	VAL	A	92	14.475	20.376	41.642	1.00	26.69	O
ATOM	613	CB	VAL	A	92	13.407	18.132	40.004	1.00	27.60	C
ATOM	614	CG1	VAL	A	92	12.164	18.800	39.432	1.00	28.15	C
ATOM	615	CG2	VAL	A	92	13.584	16.731	39.457	1.00	27.84	C
ATOM	616	N	TYR	A	93	14.312	21.334	39.598	1.00	27.77	N
ATOM	617	CA	TYR	A	93	14.120	22.661	40.108	1.00	27.91	C
ATOM	618	C	TYR	A	93	12.654	22.940	40.172	1.00	28.16	C
ATOM	619	O	TYR	A	93	11.894	22.525	39.303	1.00	28.02	O
ATOM	620	CB	TYR	A	93	14.810	23.673	39.216	1.00	27.94	C
ATOM	621	CG	TYR	A	93	16.291	23.593	39.368	1.00	29.53	C

ATOM	622	CD1	TYR A	93	16.929	24.258	40.395	1.00	29.48	C
ATOM	623	CD2	TYR A	93	17.046	22.815	38.522	1.00	30.95	C
ATOM	624	CE1	TYR A	93	18.266	24.169	40.553	1.00	29.93	C
ATOM	625	CE2	TYR A	93	18.386	22.726	38.679	1.00	31.90	C
ATOM	626	CZ	TYR A	93	18.985	23.402	39.704	1.00	31.56	C
ATOM	627	OH	TYR A	93	20.327	23.306	39.878	1.00	35.47	O
ATOM	628	N	SER A	94	12.282	23.669	41.208	1.00	28.70	N
ATOM	629	CA	SER A	94	10.913	24.037	41.459	1.00	29.47	C
ATOM	630	C	SER A	94	10.856	25.547	41.554	1.00	29.69	C
ATOM	631	O	SER A	94	11.705	26.167	42.187	1.00	29.50	O
ATOM	632	CB	SER A	94	10.456	23.411	42.774	1.00	29.32	C
ATOM	633	OG	SER A	94	9.093	23.701	43.009	1.00	30.85	O
ATOM	634	N	ALA A	95	9.858	26.146	40.928	1.00	30.39	N
ATOM	635	CA	ALA A	95	9.760	27.591	40.929	1.00	31.04	C
ATOM	636	C	ALA A	95	8.330	28.064	40.932	1.00	31.76	C
ATOM	637	O	ALA A	95	7.425	27.386	40.452	1.00	31.87	O
ATOM	638	CB	ALA A	95	10.480	28.165	39.716	1.00	31.12	C
ATOM	639	N	SER A	96	8.147	29.258	41.467	1.00	32.54	N
ATOM	640	CA	SER A	96	6.848	29.891	41.489	1.00	33.42	C
ATOM	641	C	SER A	96	6.708	30.869	40.326	1.00	33.15	C
ATOM	642	O	SER A	96	5.662	31.487	40.163	1.00	34.35	O
ATOM	643	CB	SER A	96	6.673	30.661	42.787	1.00	33.88	C
ATOM	644	OG	SER A	96	5.380	31.217	42.815	1.00	35.79	O
ATOM	645	N	THR A	97	7.775	31.031	39.554	1.00	32.09	N
ATOM	646	CA	THR A	97	7.797	31.920	38.397	1.00	31.44	C
ATOM	647	C	THR A	97	8.185	31.095	37.191	1.00	30.26	C
ATOM	648	O	THR A	97	8.693	30.003	37.348	1.00	29.72	O
ATOM	649	CB	THR A	97	8.857	33.031	38.582	1.00	31.64	C
ATOM	650	OG1	THR A	97	9.147	33.656	37.323	1.00	32.17	O
ATOM	651	CG2	THR A	97	10.227	32.455	38.978	1.00	31.73	C
ATOM	652	N	HIS A	98	7.974	31.623	35.996	1.00	29.35	N
ATOM	653	CA	HIS A	98	8.379	30.915	34.780	1.00	28.83	C
ATOM	654	C	HIS A	98	9.899	30.969	34.589	1.00	28.37	C
ATOM	655	O	HIS A	98	10.467	30.189	33.824	1.00	27.53	O
ATOM	656	CB	HIS A	98	7.671	31.490	33.548	1.00	28.76	C
ATOM	657	CG	HIS A	98	7.936	32.942	33.309	1.00	28.53	C
ATOM	658	ND1	HIS A	98	7.271	33.944	33.984	1.00	29.18	N
ATOM	659	CD2	HIS A	98	8.793	33.566	32.463	1.00	29.68	C
ATOM	660	CE1	HIS A	98	7.708	35.120	33.568	1.00	29.42	C
ATOM	661	NE2	HIS A	98	8.638	34.919	32.650	1.00	29.10	N
ATOM	662	N	LYS A	99	10.562	31.874	35.299	1.00	27.85	N
ATOM	663	CA	LYS A	99	11.997	32.041	35.124	1.00	28.24	C
ATOM	664	C	LYS A	99	12.878	31.143	35.997	1.00	27.69	C
ATOM	665	O	LYS A	99	12.892	31.278	37.216	1.00	29.10	O
ATOM	666	CB	LYS A	99	12.366	33.498	35.349	1.00	28.47	C
ATOM	667	CG	LYS A	99	11.836	34.410	34.255	1.00	30.42	C
ATOM	668	CD	LYS A	99	12.431	35.791	34.347	1.00	32.66	C
ATOM	669	CE	LYS A	99	11.757	36.624	35.421	1.00	34.45	C
ATOM	670	NZ	LYS A	99	10.569	37.347	34.884	1.00	35.39	N
ATOM	671	N	PHE A	100	13.621	30.237	35.376	1.00	26.40	N
ATOM	672	CA	PHE A	100	14.551	29.397	36.127	1.00	25.95	C
ATOM	673	C	PHE A	100	15.978	29.920	35.995	1.00	25.87	C
ATOM	674	O	PHE A	100	16.809	29.386	35.247	1.00	25.86	O
ATOM	675	CB	PHE A	100	14.469	27.945	35.686	1.00	25.48	C
ATOM	676	CG	PHE A	100	13.211	27.267	36.109	1.00	25.06	C
ATOM	677	CD1	PHE A	100	12.047	27.436	35.388	1.00	24.80	C
ATOM	678	CD2	PHE A	100	13.191	26.472	37.238	1.00	25.18	C
ATOM	679	CE1	PHE A	100	10.886	26.805	35.772	1.00	25.96	C
ATOM	680	CE2	PHE A	100	12.030	25.835	37.631	1.00	25.79	C
ATOM	681	CZ	PHE A	100	10.878	26.004	36.898	1.00	26.05	C
ATOM	682	N	LEU A	101	16.237	30.997	36.709	1.00	25.77	N

ATOM	683	CA	LEU	A	101	17.549	31.589	36.747	1.00	25.85	C
ATOM	684	C	LEU	A	101	18.527	30.605	37.381	1.00	25.87	C
ATOM	685	O	LEU	A	101	18.319	30.136	38.503	1.00	24.99	O
ATOM	686	CB	LEU	A	101	17.488	32.876	37.559	1.00	25.84	C
ATOM	687	CG	LEU	A	101	18.795	33.656	37.708	1.00	26.07	C
ATOM	688	CD1	LEU	A	101	19.244	34.200	36.377	1.00	25.11	C
ATOM	689	CD2	LEU	A	101	18.609	34.800	38.710	1.00	27.75	C
ATOM	690	N	TYR	A	102	19.582	30.274	36.644	1.00	26.56	N
ATOM	691	CA	TYR	A	102	20.611	29.380	37.159	1.00	26.99	C
ATOM	692	C	TYR	A	102	21.430	30.072	38.260	1.00	27.10	C
ATOM	693	O	TYR	A	102	21.711	31.264	38.174	1.00	27.00	O
ATOM	694	CB	TYR	A	102	21.562	28.939	36.053	1.00	27.26	C
ATOM	695	CG	TYR	A	102	22.667	28.088	36.620	1.00	28.93	C
ATOM	696	CD1	TYR	A	102	22.457	26.750	36.914	1.00	29.52	C
ATOM	697	CD2	TYR	A	102	23.906	28.636	36.909	1.00	31.11	C
ATOM	698	CE1	TYR	A	102	23.463	25.979	37.480	1.00	32.23	C
ATOM	699	CE2	TYR	A	102	24.913	27.872	37.470	1.00	32.52	C
ATOM	700	CZ	TYR	A	102	24.693	26.549	37.750	1.00	33.88	C
ATOM	701	OH	TYR	A	102	25.727	25.794	38.314	1.00	38.68	O
ATOM	702	N	TYR	A	103	21.793	29.322	39.296	1.00	26.83	N
ATOM	703	CA	TYR	A	103	22.667	29.840	40.343	1.00	27.22	C
ATOM	704	C	TYR	A	103	23.613	28.750	40.834	1.00	26.77	C
ATOM	705	O	TYR	A	103	23.287	27.556	40.853	1.00	25.60	O
ATOM	706	CB	TYR	A	103	21.880	30.440	41.517	1.00	27.38	C
ATOM	707	CG	TYR	A	103	20.909	29.493	42.154	1.00	29.11	C
ATOM	708	CD1	TYR	A	103	19.639	29.340	41.639	1.00	30.58	C
ATOM	709	CD2	TYR	A	103	21.257	28.759	43.279	1.00	32.13	C
ATOM	710	CE1	TYR	A	103	18.734	28.469	42.212	1.00	32.78	C
ATOM	711	CE2	TYR	A	103	20.357	27.887	43.877	1.00	33.15	C
ATOM	712	CZ	TYR	A	103	19.096	27.745	43.329	1.00	34.41	C
ATOM	713	OH	TYR	A	103	18.187	26.888	43.892	1.00	37.44	O
ATOM	714	N	ASP	A	104	24.798	29.182	41.225	1.00	26.36	N
ATOM	715	CA	ASP	A	104	25.832	28.273	41.673	1.00	26.28	C
ATOM	716	C	ASP	A	104	25.802	28.239	43.184	1.00	26.21	C
ATOM	717	O	ASP	A	104	26.163	29.212	43.845	1.00	25.45	O
ATOM	718	CB	ASP	A	104	27.174	28.765	41.154	1.00	25.92	C
ATOM	719	CG	ASP	A	104	28.330	27.889	41.575	1.00	27.39	C
ATOM	720	OD1	ASP	A	104	28.161	26.973	42.437	1.00	27.13	O
ATOM	721	OD2	ASP	A	104	29.459	28.068	41.075	1.00	27.68	O
ATOM	722	N	GLU	A	105	25.358	27.114	43.724	1.00	26.46	N
ATOM	723	CA	GLU	A	105	25.218	26.962	45.162	1.00	27.02	C
ATOM	724	C	GLU	A	105	26.540	27.199	45.916	1.00	26.91	C
ATOM	725	O	GLU	A	105	26.523	27.718	47.026	1.00	26.51	O
ATOM	726	CB	GLU	A	105	24.602	25.587	45.481	1.00	27.45	C
ATOM	727	CG	GLU	A	105	23.088	25.556	45.254	1.00	29.46	C
ATOM	728	CD	GLU	A	105	22.527	24.158	45.025	1.00	32.85	C
ATOM	729	OE1	GLU	A	105	22.908	23.234	45.765	1.00	32.90	O
ATOM	730	OE2	GLU	A	105	21.703	23.980	44.085	1.00	35.16	O
ATOM	731	N	LYS	A	106	27.680	26.874	45.305	1.00	27.12	N
ATOM	732	CA	LYS	A	106	28.979	27.041	45.983	1.00	27.54	C
ATOM	733	C	LYS	A	106	29.331	28.493	46.258	1.00	27.70	C
ATOM	734	O	LYS	A	106	30.164	28.769	47.099	1.00	27.61	O
ATOM	735	CB	LYS	A	106	30.127	26.441	45.163	1.00	27.58	C
ATOM	736	CG	LYS	A	106	30.038	24.928	44.918	1.00	28.61	C
ATOM	737	N	LYS	A	107	28.713	29.420	45.537	1.00	27.99	N
ATOM	738	CA	LYS	A	107	29.020	30.826	45.694	1.00	28.30	C
ATOM	739	C	LYS	A	107	28.034	31.513	46.631	1.00	29.21	C
ATOM	740	O	LYS	A	107	28.175	32.701	46.917	1.00	29.08	O
ATOM	741	CB	LYS	A	107	29.040	31.524	44.324	1.00	28.30	C
ATOM	742	CG	LYS	A	107	30.344	31.291	43.516	1.00	28.07	C
ATOM	743	CD	LYS	A	107	30.242	31.737	42.034	1.00	27.29	C

ATOM	744	CE	LYS A 107	31.584	31.518	41.315	1.00	26.86	C
ATOM	745	NZ	LYS A 107	31.642	31.889	39.870	1.00	24.80	N
ATOM	746	N	MET A 108	27.041	30.781	47.125	1.00	30.08	N
ATOM	747	CA	MET A 108	26.031	31.405	47.982	1.00	31.53	C
ATOM	748	C	MET A 108	26.581	31.952	49.309	1.00	32.44	C
ATOM	749	O	MET A 108	26.102	32.972	49.812	1.00	32.47	O
ATOM	750	CB	MET A 108	24.862	30.452	48.218	1.00	31.81	C
ATOM	751	CG	MET A 108	24.072	30.193	46.932	1.00	33.07	C
ATOM	752	SD	MET A 108	22.625	29.140	47.064	1.00	35.76	S
ATOM	753	CE	MET A 108	21.540	30.140	48.050	1.00	35.99	C
ATOM	754	N	ALA A 109	27.603	31.315	49.860	1.00	33.56	N
ATOM	755	CA	ALA A 109	28.154	31.769	51.138	1.00	34.94	C
ATOM	756	C	ALA A 109	28.651	33.212	51.060	1.00	35.81	C
ATOM	757	O	ALA A 109	28.483	33.989	51.991	1.00	36.23	O
ATOM	758	CB	ALA A 109	29.279	30.838	51.606	1.00	34.82	C
ATOM	759	N	ASN A 110	29.236	33.575	49.929	1.00	37.05	N
ATOM	760	CA	ASN A 110	29.774	34.918	49.748	1.00	37.94	C
ATOM	761	C	ASN A 110	28.731	35.992	49.413	1.00	38.13	C
ATOM	762	O	ASN A 110	29.064	37.167	49.293	1.00	37.92	O
ATOM	763	CB	ASN A 110	30.855	34.878	48.669	1.00	38.16	C
ATOM	764	CG	ASN A 110	32.050	34.035	49.079	1.00	39.37	C
ATOM	765	OD1	ASN A 110	32.407	33.964	50.265	1.00	40.12	O
ATOM	766	ND2	ASN A 110	32.670	33.377	48.103	1.00	39.46	N
ATOM	767	N	PHE A 111	27.480	35.588	49.234	1.00	38.71	N
ATOM	768	CA	PHE A 111	26.408	36.539	48.966	1.00	39.02	C
ATOM	769	C	PHE A 111	25.180	36.135	49.773	1.00	39.71	C
ATOM	770	O	PHE A 111	24.143	35.747	49.232	1.00	39.45	O
ATOM	771	CB	PHE A 111	26.091	36.603	47.471	1.00	38.97	C
ATOM	772	CG	PHE A 111	27.110	37.362	46.672	1.00	38.04	C
ATOM	773	CD1	PHE A 111	28.329	36.791	46.363	1.00	37.99	C
ATOM	774	CD2	PHE A 111	26.851	38.642	46.235	1.00	36.83	C
ATOM	775	CE1	PHE A 111	29.269	37.493	45.635	1.00	37.68	C
ATOM	776	CE2	PHE A 111	27.788	39.339	45.500	1.00	36.08	C
ATOM	777	CZ	PHE A 111	28.994	38.768	45.208	1.00	35.84	C
ATOM	778	N	GLN A 112	25.315	36.267	51.085	1.00	40.62	N
ATOM	779	CA	GLN A 112	24.286	35.852	52.029	1.00	41.31	C
ATOM	780	C	GLN A 112	22.915	36.430	51.721	1.00	41.10	C
ATOM	781	O	GLN A 112	21.906	35.827	52.060	1.00	41.31	O
ATOM	782	CB	GLN A 112	24.701	36.236	53.451	1.00	41.65	C
ATOM	783	CG	GLN A 112	26.058	35.694	53.882	1.00	43.80	C
ATOM	784	CD	GLN A 112	26.104	34.177	53.938	1.00	46.42	C
ATOM	785	OE1	GLN A 112	25.394	33.501	53.191	1.00	48.56	O
ATOM	786	NE2	GLN A 112	26.951	33.637	54.816	1.00	46.94	N
ATOM	787	N	ASN A 113	22.876	37.588	51.074	1.00	41.02	N
ATOM	788	CA	ASN A 113	21.606	38.229	50.749	1.00	40.98	C
ATOM	789	C	ASN A 113	20.954	37.760	49.440	1.00	40.71	C
ATOM	790	O	ASN A 113	19.889	38.251	49.071	1.00	40.77	O
ATOM	791	CB	ASN A 113	21.778	39.753	50.737	1.00	41.09	C
ATOM	792	CG	ASN A 113	22.129	40.314	52.123	1.00	41.51	C
ATOM	793	OD1	ASN A 113	21.717	39.772	53.158	1.00	40.60	O
ATOM	794	ND2	ASN A 113	22.892	41.401	52.141	1.00	41.19	N
ATOM	795	N	PHE A 114	21.571	36.826	48.725	1.00	40.34	N
ATOM	796	CA	PHE A 114	20.934	36.321	47.515	1.00	39.86	C
ATOM	797	C	PHE A 114	19.908	35.266	47.902	1.00	39.46	C
ATOM	798	O	PHE A 114	20.235	34.299	48.584	1.00	38.82	O
ATOM	799	CB	PHE A 114	21.940	35.714	46.552	1.00	39.96	C
ATOM	800	CG	PHE A 114	21.298	35.059	45.362	1.00	40.54	C
ATOM	801	CD1	PHE A 114	20.670	35.828	44.395	1.00	40.29	C
ATOM	802	CD2	PHE A 114	21.295	33.679	45.224	1.00	40.62	C
ATOM	803	CE1	PHE A 114	20.061	35.237	43.307	1.00	40.20	C
ATOM	804	CE2	PHE A 114	20.684	33.082	44.126	1.00	40.36	C

ATOM	805	CZ	PHE A 114	20.066	33.866	43.172	1.00	40.52	C
ATOM	806	N	LYS A 115	18.669	35.457	47.461	1.00	39.11	N
ATOM	807	CA	LYS A 115	17.596	34.529	47.787	1.00	39.02	C
ATOM	808	C	LYS A 115	17.042	33.938	46.497	1.00	38.71	C
ATOM	809	O	LYS A 115	16.285	34.590	45.787	1.00	39.00	O
ATOM	810	CB	LYS A 115	16.498	35.251	48.578	1.00	39.14	C
ATOM	811	N	PRO A 116	17.389	32.691	46.213	1.00	38.17	N
ATOM	812	CA	PRO A 116	17.027	32.060	44.938	1.00	37.95	C
ATOM	813	C	PRO A 116	15.532	31.889	44.783	1.00	37.38	C
ATOM	814	O	PRO A 116	14.865	31.506	45.733	1.00	37.36	O
ATOM	815	CB	PRO A 116	17.684	30.679	45.004	1.00	38.15	C
ATOM	816	CG	PRO A 116	18.416	30.604	46.297	1.00	38.40	C
ATOM	817	CD	PRO A 116	18.079	31.775	47.125	1.00	38.19	C
ATOM	818	N	ARG A 117	15.027	32.161	43.590	1.00	36.84	N
ATOM	819	CA	ARG A 117	13.611	32.028	43.293	1.00	36.61	C
ATOM	820	C	ARG A 117	13.259	30.581	42.984	1.00	36.38	C
ATOM	821	O	ARG A 117	12.084	30.230	42.913	1.00	36.44	O
ATOM	822	CB	ARG A 117	13.235	32.913	42.122	1.00	36.62	C
ATOM	823	N	SER A 118	14.271	29.745	42.777	1.00	35.79	N
ATOM	824	CA	SER A 118.	14.025	28.339	42.538	1.00	35.51	C
ATOM	825	C	SER A 118	14.844	27.491	43.512	1.00	35.35	C
ATOM	826	O	SER A 118	15.888	27.923	43.991	1.00	35.16	O
ATOM	827	CB	SER A 118	14.330	27.976	41.086	1.00	35.26	C
ATOM	828	OG	SER A 118	15.689	28.164	40.795	1.00	35.14	O
ATOM	829	N	ASN A 119	14.329	26.306	43.824	1.00	35.11	N
ATOM	830	CA	ASN A 119.	14.997	25.373	44.715	1.00	35.21	C
ATOM	831	C	ASN A 119	15.233	24.049	44.022	1.00	34.26	C
ATOM	832	O	ASN A 119	14.401	23.595	43.244	1.00	34.11	O
ATOM	833	CB	ASN A 119	14.145	25.110	45.957	1.00	35.95	C
ATOM	834	CG	ASN A 119	13.636	26.382	46.592	1.00	38.47	C
ATOM	835	OD1	ASN A 119	14.417	27.245	47.025	1.00	41.76	O
ATOM	836	ND2	ASN A 119	12.314	26.511	46.657	1.00	42.21	N
ATOM	837	N	ARG A 120	16.368	23.434	44.326	1.00	33.75	N
ATOM	838	CA	ARG A 120	16.750	22.149	43.761	1.00	33.33	C
ATOM	839	C	ARG A 120	16.327	21.045	44.699	1.00	33.26	C
ATOM	840	O	ARG A 120	16.523	21.138	45.910	1.00	33.07	O
ATOM	841	CB	ARG A 120	18.270	22.075	43.592	1.00	33.37	C
ATOM	842	CG	ARG A 120	18.759	20.889	42.771	1.00	32.70	C
ATOM	843	CD	ARG A 120	20.277	20.732	42.743	1.00	31.64	C
ATOM	844	NE	ARG A 120	20.892	21.165	43.992	1.00	31.16	N
ATOM	845	CZ	ARG A 120	21.233	20.357	44.993	1.00	31.33	C
ATOM	846	NH1	ARG A 120	21.027	19.047	44.920	1.00	30.77	N
ATOM	847	NH2	ARG A 120	21.789	20.867	46.077	1.00	31.01	N
ATOM	848	N	GLU A 121	15.735	20.001	44.137	1.00	32.98	N
ATOM	849	CA	GLU A 121	15.379	18.827	44.904	1.00	32.85	C
ATOM	850	C	GLU A 121	15.846	17.630	44.095	1.00	32.17	C
ATOM	851	O	GLU A 121	15.744	17.612	42.864	1.00	32.36	O
ATOM	852	CB	GLU A 121·	13.874	18.767	45.179	1.00	33.21	C
ATOM	853	CG	GLU A 121	13.420	17.468	45.826	1.00	35.39	C
ATOM	854	CD	GLU A 121	12.189	17.629	46.699	1.00	38.11	C
ATOM	855	OE1	GLU A 121	12.326	18.152	47.830	1.00	41.26	O
ATOM	856	OE2	GLU A 121	11.091	17.221	46.270	1.00	39.55	O
ATOM	857	N	GLU A 122	16.400	16.648	44.786	1.00	31.28	N
ATOM	858	CA	GLU A 122	16.886	15.448	44.150	1.00	30.61	C
ATOM	859	C	GLU A 122	15.814	14.392	44.298	1.00	30.31	C
ATOM	860	O	GLU A 122	15.328	14.165	45.395	1.00	30.07	O
ATOM	861	CB	GLU A 122	18.163	14.980	44.833	1.00	30.52	C
ATOM	862	CG	GLU A 122	19.293	15.983	44.771	1.00	29.67	C
ATOM	863	CD	GLU A 122	19.747	16.253	43.348	1.00	29.79	C
ATOM	864	OE1	GLU A 122	20.120	15.280	42.667	1.00	28.28	O
ATOM	865	OE2	GLU A 122	19.734	17.439	42.914	1.00	27.93	O

ATOM	866	N	MET A 123	15.432	13.751	43.202	1.00	29.74	N
ATOM	867	CA	MET A 123	14.407	12.728	43.277	1.00	29.77	C
ATOM	868	C	MET A 123	14.594	11.683	42.202	1.00	29.31	C
ATOM	869	O	MET A 123	15.408	11.842	41.294	1.00	29.42	O
ATOM	870	CB	MET A 123	13.016	13.354	43.165	1.00	29.81	C
ATOM	871	CG	MET A 123	12.749	14.057	41.865	1.00	30.27	C
ATOM	872	SD	MET A 123	11.181	14.960	41.871	1.00	31.65	S
ATOM	873	CE	MET A 123	11.582	16.371	42.804	1.00	31.47	C
ATOM	874	N	LYS A 124	13.835	10.604	42.332	1.00	28.82	N
ATOM	875	CA	LYS A 124	13.841	9.535	41.352	1.00	28.33	C
ATOM	876	C	LYS A 124	12.959	9.976	40.191	1.00	27.51	C
ATOM	877	O	LYS A 124	12.077	10.817	40.361	1.00	26.52	O
ATOM	878	CB	LYS A 124	13.330	8.242	41.984	1.00	28.45	C
ATOM	879	CG	LYS A 124	14.153	7.783	43.204	1.00	29.42	C
ATOM	880	CD	LYS A 124	15.597	7.442	42.804	1.00	30.46	C
ATOM	881	CE	LYS A 124	16.479	7.067	43.992	1.00	30.52	C
ATOM	882	NZ	LYS A 124	17.928	7.324	43.699	1.00	30.05	N
ATOM	883	N	PHE A 125	13.188	9.407	39.014	1.00	26.98	N
ATOM	884	CA	PHE A 125	12.477	9.871	37.826	1.00	26.83	C
ATOM	885	C	PHE A 125	10.974	9.762	37.972	1.00	26.77	C
ATOM	886	O	PHE A 125	10.245	10.673	37.585	1.00	26.38	O
ATOM	887	CB	PHE A 125	12.927	9.138	36.568	1.00	26.71	C
ATOM	888	CG	PHE A 125	12.613	9.891	35.316	1.00	26.32	C
ATOM	889	CD1	PHE A 125	13.476	10.876	34.849	1.00	26.29	C
ATOM	890	CD2	PHE A 125	11.438	9.657	34.635	1.00	26.06	C
ATOM	891	CE1	PHE A 125	13.183	11.594	33.715	1.00	25.70	C
ATOM	892	CE2	PHE A 125	11.140	10.368	33.483	1.00	26.70	C
ATOM	893	CZ	PHE A 125	12.018	11.341	33.025	1.00	26.87	C
ATOM	894	N	HIS A 126	10.527	8.649	38.550	1.00	26.77	N
ATOM	895	CA	HIS A 126	9.113	8.396	38.753	1.00	26.82	C
ATOM	896	C	HIS A 126	8.517	9.390	39.734	1.00	26.68	C
ATOM	897	O	HIS A 126	7.326	9.670	39.687	1.00	26.03	O
ATOM	898	CB	HIS A 126	8.882	6.951	39.238	1.00	27.07	C
ATOM	899	CG	HIS A 126	9.028	6.767	40.717	1.00	27.39	C
ATOM	900	ND1	HIS A 126	7.959	6.836	41.582	1.00	28.48	N
ATOM	901	CD2	HIS A 126	10.115	6.505	41.484	1.00	28.33	C
ATOM	902	CE1	HIS A 126	8.382	6.636	42.819	1.00	28.68	C
ATOM	903	NE2	HIS A 126	9.687	6.439	42.788	1.00	27.97	N
ATOM	904	N	GLU A 127	9.342	9.918	40.630	1.00	27.00	N
ATOM	905	CA	GLU A 127	8.876	10.930	41.572	1.00	27.34	C
ATOM	906	C	GLU A 127	8.683	12.259	40.838	1.00	27.36	C
ATOM	907	O	GLU A 127	7.761	13.026	41.126	1.00	26.86	O
ATOM	908	CB	GLU A 127	9.862	11.084	42.728	1.00	27.31	C
ATOM	909	CG	GLU A 127	10.018	9.821	43.552	1.00	28.69	C
ATOM	910	CD	GLU A 127	10.959	9.992	44.722	1.00	29.65	C
ATOM	911	OE1	GLU A 127	12.139	10.318	44.485	1.00	29.56	O
ATOM	912	OE2	GLU A 127	10.509	9.787	45.876	1.00	30.92	O
ATOM	913	N	PHE A 128	9.554	12.519	39.876	1.00	27.91	N
ATOM	914	CA	PHE A 128	9.453	13.736	39.068	1.00	28.21	C
ATOM	915	C	PHE A 128	8.149	13.658	38.282	1.00	29.04	C
ATOM	916	O	PHE A 128	7.354	14.600	38.255	1.00	29.03	O
ATOM	917	CB	PHE A 128	10.643	13.838	38.115	1.00	27.74	C
ATOM	918	CG	PHE A 128	10.427	14.792	36.959	1.00	27.06	C
ATOM	919	CD1	PHE A 128	10.189	16.138	37.185	1.00	25.41	C
ATOM	920	CD2	PHE A 128	10.480	14.343	35.657	1.00	25.60	C
ATOM	921	CE1	PHE A 128	9.985	17.000	36.144	1.00	25.41	C
ATOM	922	CE2	PHE A 128	10.281	15.215	34.604	1.00	26.59	C
ATOM	923	CZ	PHE A 128	10.032	16.540	34.846	1.00	25.61	C
ATOM	924	N	VAL A 129	7.925	12.500	37.677	1.00	29.90	N
ATOM	925	CA	VAL A 129	6.756	12.285	36.847	1.00	30.82	C
ATOM	926	C	VAL A 129	5.476	12.447	37.669	1.00	31.61	C

ATOM	927	O	VAL	A	129	4.515	13.091	37.234	1.00	31.39	O
ATOM	928	CB	VAL	A	129	6.793	10.883	36.213	1.00	30.92	C
ATOM	929	CG1	VAL	A	129	5.479	10.582	35.503	1.00	31.15	C
ATOM	930	CG2	VAL	A	129	7.975	10.751	35.253	1.00	30.61	C
ATOM	931	N	GLU	A	130	5.475	11.858	38.861	1.00	32.42	N
ATOM	932	CA	GLU	A	130	4.332	11.946	39.761	1.00	33.13	C
ATOM	933	C	GLU	A	130	4.070	13.403	40.126	1.00	33.42	C
ATOM	934	O	GLU	A	130	2.930	13.867	40.081	1.00	33.01	O
ATOM	935	CB	GLU	A	130	4.587	11.108	41.017	1.00	33.20	C
ATOM	936	CG	GLU	A	130	4.537	9.609	40.755	1.00	34.22	C
ATOM	937	CD	GLU	A	130	5.294	8.792	41.789	1.00	35.55	C
ATOM	938	OE1	GLU	A	130	5.630	9.339	42.861	1.00	37.02	O
ATOM	939	OE2	GLU	A	130	5.558	7.598	41.525	1.00	35.99	O
ATOM	940	N	LYS	A	131	5.128	14.120	40.486	1.00	34.00	N
ATOM	941	CA	LYS	A	131	4.994	15.538	40.800	1.00	34.79	C
ATOM	942	C	LYS	A	131	4.354	16.286	39.637	1.00	35.25	C
ATOM	943	O	LYS	A	131	3.449	17.089	39.835	1.00	34.81	O
ATOM	944	CB	LYS	A	131	6.345	16.171	41.100	1.00	34.89	C
ATOM	945	CG	LYS	A	131	6.597	16.477	42.554	1.00	35.57	C
ATOM	946	CD	LYS	A	131	7.191	17.868	42.694	1.00	36.25	C
ATOM	947	CE	LYS	A	131	7.862	18.072	44.034	1.00	37.30	C
ATOM	948	NZ	LYS	A	131	8.108	19.526	44.332	1.00	37.49	N
ATOM	949	N	LEU	A	132	4.829	16.038	38.422	1.00	36.00	N
ATOM	950	CA	LEU	A	132	4.243	16.701	37.268	1.00	37.05	C
ATOM	951	C	LEU	A	132	2.755	16.406	37.170	1.00	37.67	C
ATOM	952	O	LEU	A	132	1.963	17.300	36.870	1.00	37.77	O
ATOM	953	CB	LEU	A	132	4.919	16.260	35.979	1.00	37.39	C
ATOM	954	CG	LEU	A	132	6.310	16.803	35.710	1.00	38.29	C
ATOM	955	CD1	LEU	A	132	6.783	16.289	34.363	1.00	39.35	C
ATOM	956	CD2	LEU	A	132	6.306	18.314	35.721	1.00	39.70	C
ATOM	957	N	GLN	A	133	2.386	15.151	37.417	1.00	38.34	N
ATOM	958	CA	GLN	A	133	0.989	14.730	37.373	1.00	39.11	C
ATOM	959	C	GLN	A	133	0.132	15.434	38.427	1.00	39.73	C
ATOM	960	O	GLN	A	133	-0.966	15.897	38.126	1.00	39.61	O
ATOM	961	CB	GLN	A	133	0.886	13.213	37.538	1.00	39.05	C
ATOM	962	N	ASP	A	134	0.629	15.507	39.658	1.00	40.61	N
ATOM	963	CA	ASP	A	134	-0.108	16.149	40.747	1.00	41.70	C
ATOM	964	C	ASP	A	134	-0.398	17.626	40.451	1.00	41.68	C
ATOM	965	O	ASP	A	134	-1.470	18.137	40.770	1.00	41.28	O
ATOM	966	CB	ASP	A	134	0.678	16.030	42.056	1.00	42.32	C
ATOM	967	CG	ASP	A	134	-0.165	16.351	43.286	1.00	44.92	C
ATOM	968	OD1	ASP	A	134	-1.235	16.991	43.152	1.00	48.33	O
ATOM	969	OD2	ASP	A	134	0.164	15.991	44.442	1.00	48.64	O
ATOM	970	N	ILE	A	135	0.563	18.312	39.842	1.00	41.92	N
ATOM	971	CA	ILE	A	135	0.383	19.717	39.512	1.00	42.18	C
ATOM	972	C	ILE	A	135	-0.715	19.862	38.471	1.00	42.41	C
ATOM	973	O	ILE	A	135	-1.635	20.664	38.634	1.00	42.49	O
ATOM	974	CB	ILE	A	135	1.696	20.324	38.997	1.00	42.17	C
ATOM	975	CG1	ILE	A	135	2.720	20.399	40.131	1.00	42.25	C
ATOM	976	CG2	ILE	A	135	1.451	21.708	38.437	1.00	42.11	C
ATOM	977	CD1	ILE	A	135	4.151	20.438	39.653	1.00	42.91	C
ATOM	978	N	GLN	A	136	-0.614	19.075	37.407	1.00	42.71	N
ATOM	979	CA	GLN	A	136	-1.593	19.114	36.333	1.00	43.09	C
ATOM	980	C	GLN	A	136	-2.991	18.935	36.900	1.00	43.56	C
ATOM	981	O	GLN	A	136	-3.863	19.785	36.707	1.00	43.93	O
ATOM	982	CB	GLN	A	136	-1.298	18.031	35.317	1.00	43.10	C
ATOM	983	N	GLN	A	137	-3.181	17.844	37.635	1.00	43.82	N
ATOM	984	CA	GLN	A	137	-4.486	17.493	38.182	1.00	44.02	C
ATOM	985	C	GLN	A	137	-5.023	18.540	39.144	1.00	44.08	C
ATOM	986	O	GLN	A	137	-6.202	18.891	39.080	1.00	44.46	O
ATOM	987	CB	GLN	A	137	-4.425	16.124	38.868	1.00	44.00	C

ATOM	988	N	ARG A 138	-4.169	19.043	40.031	1.00	43.93	N
ATOM	989	CA	ARG A 138	-4.606	20.022	41.024	1.00	43.76	C
ATOM	990	C	ARG A 138	-4.578	21.445	40.463	1.00	43.34	C
ATOM	991	O	ARG A 138	-4.681	22.415	41.214	1.00	43.54	O
ATOM	992	CB	ARG A 138	-3.751	19.919	42.299	1.00	43.84	C
ATOM	993	CG	ARG A 138	-2.420	20.679	42.279	1.00	44.85	C
ATOM	994	CD	ARG A 138	-1.493	20.279	43.420	1.00	45.82	C
ATOM	995	NE	ARG A 138	-0.372	21.197	43.620	1.00	46.44	N
ATOM	996	CZ	ARG A 138	0.914	20.863	43.499	1.00	47.95	C
ATOM	997	NH1	ARG A 138	1.262	19.627	43.162	1.00	49.02	N
ATOM	998	NH2	ARG A 138	1.864	21.767	43.709	1.00	47.70	N
ATOM	999	N	GLY A 139	-4.450	21.569	39.143	1.00	42.62	N
ATOM	1000	CA	GLY A 139	-4.371	22.871	38.504	1.00	41.93	C
ATOM	1001	C	GLY A 139	-3.389	23.820	39.174	1.00	41.28	C
ATOM	1002	O	GLY A 139	-3.607	25.030	39.196	1.00	41.58	O
ATOM	1003	N	GLY A 140	-2.291	23.292	39.703	1.00	40.31	N
ATOM	1004	CA	GLY A 140	-1.329	24.119	40.410	1.00	39.43	C
ATOM	1005	C	GLY A 140	-0.563	25.070	39.512	1.00	38.71	C
ATOM	1006	O	GLY A 140	-0.495	24.871	38.294	1.00	38.40	O
ATOM	1007	N	GLU A 141	0.003	26.117	40.110	1.00	37.82	N
ATOM	1008	CA	GLU A 141	0.829	27.066	39.363	1.00	37.20	C
ATOM	1009	C	GLU A 141	2.320	26.726	39.491	1.00	35.94	C
ATOM	1010	O	GLU A 141	3.160	27.356	38.845	1.00	35.76	O
ATOM	1011	CB	GLU A 141	0.590	28.510	39.828	1.00	37.63	C
ATOM	1012	CG	GLU A 141	-0.729	29.146	39.379	1.00	39.51	C
ATOM	1013	CD	GLU A 141	-0.936	29.164	37.866	1.00	41.63	C
ATOM	1014	OE1	GLU A 141	0.056	29.147	37.102	1.00	42.42	O
ATOM	1015	OE2	GLU A 141	-2.115	29.202	37.434	1.00	43.77	O
ATOM	1016	N	GLU A 142	2.652	25.742	40.326	1.00	34.29	N
ATOM	1017	CA	GLU A 142	4.045	25.351	40.510	1.00	33.08	C
ATOM	1018	C	GLU A 142	4.655	24.938	39.170	1.00	31.87	C
ATOM	1019	O	GLU A 142	3.958	24.443	38.296	1.00	31.87	O
ATOM	1020	CB	GLU A 142	4.170	24.201	41.519	1.00	32.96	C
ATOM	1021	CG	GLU A 142	5.610	23.914	41.942	1.00	32.71	C
ATOM	1022	CD	GLU A 142	5.761	22.730	42.896	1.00	33.55	C
ATOM	1023	OE1	GLU A 142	4.778	22.001	43.146	1.00	32.41	O
ATOM	1024	OE2	GLU A 142	6.888	22.520	43.398	1.00	34.13	O
ATOM	1025	N	ARG A 143	5.954	25.156	39.017	1.00	30.56	N
ATOM	1026	CA	ARG A 143	6.662	24.766	37.803	1.00	29.79	C
ATOM	1027	C	ARG A 143	7.878	23.939	38.142	1.00	28.70	C
ATOM	1028	O	ARG A 143	8.565	24.210	39.127	1.00	28.88	O
ATOM	1029	CB	ARG A 143	7.142	25.991	37.040	1.00	29.90	C
ATOM	1030	CG	ARG A 143	6.043	26.832	36.441	1.00	30.80	C
ATOM	1031	CD	ARG A 143	6.591	27.992	35.636	1.00	30.70	C
ATOM	1032	NE	ARG A 143	5.538	28.715	34.935	1.00	30.86	N
ATOM	1033	CZ	ARG A 143	5.168	28.487	33.682	1.00	29.53	C
ATOM	1034	NH1	ARG A 143	5.763	27.547	32.941	1.00	27.51	N
ATOM	1035	NH2	ARG A 143	4.196	29.216	33.168	1.00	30.04	N
ATOM	1036	N	LEU A 144	8.156	22.943	37.315	1.00	27.27	N
ATOM	1037	CA	LEU A 144	9.319	22.102	37.518	1.00	26.47	C
ATOM	1038	C	LEU A 144	10.220	22.148	36.297	1.00	25.40	C
ATOM	1039	O	LEU A 144	9.755	22.330	35.172	1.00	25.39	O
ATOM	1040	CB	LEU A 144	8.893	20.652	37.753	1.00	26.70	C
ATOM	1041	CG	LEU A 144	7.922	20.416	38.915	1.00	27.15	C
ATOM	1042	CD1	LEU A 144	7.575	18.921	39.059	1.00	27.40	C
ATOM	1043	CD2	LEU A 144	8.488	20.956	40.221	1.00	27.42	C
ATOM	1044	N	TYR A 145	11.511	21.974	36.527	1.00	23.90	N
ATOM	1045	CA	TYR A 145	12.458	21.871	35.441	1.00	23.15	C
ATOM	1046	C	TYR A 145	13.516	20.857	35.868	1.00	23.04	C
ATOM	1047	O	TYR A 145	14.328	21.130	36.740	1.00	22.58	O
ATOM	1048	CB	TYR A 145	13.080	23.235	35.107	1.00	23.01	C

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ATOM   1049  CG   TYR A 145      13.522  23.419  33.666  1.00 21.34           C
ATOM   1050  CD1  TYR A 145      13.824  22.333  32.863  1.00 20.11           C
ATOM   1051  CD2  TYR A 145      13.662  24.691  33.119  1.00 21.14           C
ATOM   1052  CE1  TYR A 145      14.219  22.494  31.563  1.00 20.22           C
ATOM   1053  CE2  TYR A 145      14.075  24.866  31.807  1.00 19.81           C
ATOM   1054  CZ   TYR A 145      14.349  23.764  31.027  1.00 19.19           C
ATOM   1055  OH   TYR A 145      14.736  23.903  29.699  1.00 18.36           O
ATOM   1056  N    LEU A 146      13.461  19.666  35.287  1.00 22.75           N
ATOM   1057  CA   LEU A 146      14.490  18.661  35.516  1.00 23.17           C
ATOM   1058  C    LEU A 146      15.720  19.005  34.679  1.00 22.99           C
ATOM   1059  O    LEU A 146      15.604  19.264  33.490  1.00 22.81           O
ATOM   1060  CB   LEU A 146      13.980  17.282  35.115  1.00 23.33           C
ATOM   1061  CG   LEU A 146      14.992  16.141  35.274  1.00 24.98           C
ATOM   1062  CD1  LEU A 146      14.276  14.846  35.622  1.00 24.56           C
ATOM   1063  CD2  LEU A 146      15.849  15.946  34.016  1.00 26.13           C
ATOM   1064  N    GLN A 147      16.891  18.983  35.299  1.00 23.05           N
ATOM   1065  CA   GLN A 147      18.135  19.314  34.619  1.00 23.65           C
ATOM   1066  C    GLN A 147      19.158  18.394  35.231  1.00 23.86           C
ATOM   1067  O    GLN A 147      19.573  18.597  36.364  1.00 24.61           O
ATOM   1068  CB   GLN A 147      18.516  20.793  34.821  1.00 23.53           C
ATOM   1069  CG   GLN A 147      17.386  21.770  34.461  1.00 24.34           C
ATOM   1070  CD   GLN A 147      17.800  23.238  34.482  1.00 26.20           C
ATOM   1071  OE1  GLN A 147      17.034  24.114  34.035  1.00 29.67           O
ATOM   1072  NE2  GLN A 147      18.979  23.514  34.988  1.00 21.33           N
ATOM   1073  N    GLN A 148      19.542  17.369  34.485  1.00 24.35           N
ATOM   1074  CA   GLN A 148      20.393  16.314  35.006  1.00 24.70           C
ATOM   1075  C    GLN A 148      21.319  15.753  33.964  1.00 25.16           C
ATOM   1076  O    GLN A 148      20.898  15.378  32.866  1.00 24.21           O
ATOM   1077  CB   GLN A 148      19.525  15.172  35.526  1.00 24.97           C
ATOM   1078  CG   GLN A 148      20.317  13.940  35.953  1.00 25.54           C
ATOM   1079  CD   GLN A 148      21.275  14.256  37.085  1.00 26.98           C
ATOM   1080  OE1  GLN A 148      20.892  14.941  38.042  1.00 26.73           O
ATOM   1081  NE2  GLN A 148      22.522  13.786  36.976  1.00 26.37           N
ATOM   1082  N    THR A 149      22.592  15.704  34.321  1.00 25.94           N
ATOM   1083  CA   THR A 149      23.603  15.134  33.466  1.00 27.43           C
ATOM   1084  C    THR A 149      23.369  13.632  33.324  1.00 27.29           C
ATOM   1085  O    THR A 149      23.081  12.965  34.303  1.00 27.40           O
ATOM   1086  CB   THR A 149      24.990  15.430  34.075  1.00 27.91           C
ATOM   1087  OG1  THR A 149      25.282  16.829  33.901  1.00 30.41           O
ATOM   1088  CG2  THR A 149      26.078  14.776  33.276  1.00 30.12           C
ATOM   1089  N    LEU A 150      23.461  13.117  32.100  1.00 27.79           N
ATOM   1090  CA   LEU A 150      23.321  11.690  31.832  1.00 28.02           C
ATOM   1091  C    LEU A 150      24.549  10.935  32.364  1.00 28.42           C
ATOM   1092  O    LEU A 150      25.682  11.261  32.002  1.00 28.86           O
ATOM   1093  CB   LEU A 150      23.194  11.435  30.326  1.00 28.08           C
ATOM   1094  CG   LEU A 150      21.929  11.937  29.622  1.00 28.70           C
ATOM   1095  CD1  LEU A 150      22.016  11.725  28.117  1.00 28.62           C
ATOM   1096  CD2  LEU A 150      20.697  11.260  30.175  1.00 29.47           C
ATOM   1097  N    ASN A 151      24.332   9.928  33.203  1.00 28.58           N
ATOM   1098  CA   ASN A 151      25.434   9.156  33.781  1.00 28.79           C
ATOM   1099  C    ASN A 151      25.194   7.636  33.782  1.00 29.24           C
ATOM   1100  O    ASN A 151      24.197   7.163  33.238  1.00 29.60           O
ATOM   1101  CB   ASN A 151      25.657   9.631  35.208  1.00 28.77           C
ATOM   1102  CG   ASN A 151      24.459   9.367  36.084  1.00 28.05           C
ATOM   1103  OD1  ASN A 151      23.936   8.246  36.126  1.00 29.02           O
ATOM   1104  ND2  ASN A 151      24.000  10.396  36.772  1.00 26.99           N
ATOM   1105  N    ASP A 152      26.083   6.885  34.437  1.00 29.71           N
ATOM   1106  CA   ASP A 152      26.039   5.410  34.448  1.00 30.06           C
ATOM   1107  C    ASP A 152      24.850   4.733  35.075  1.00 29.51           C
ATOM   1108  O    ASP A 152      24.771   3.503  35.026  1.00 28.98           O
ATOM   1109  CB   ASP A 152      27.199   4.829  35.250  1.00 30.99           C
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ATOM	1110	CG	ASP A 152	28.447	5.561	35.048	1.00	33.80	C
ATOM	1111	OD1	ASP A 152	28.636	6.071	33.918	1.00	40.13	O
ATOM	1112	OD2	ASP A 152	29.274	5.719	35.960	1.00	35.65	O
ATOM	1113	N	THR A 153	23.959	5.468	35.722	1.00	28.96	N
ATOM	1114	CA	THR A 153	22.831	4.792	36.359	1.00	28.42	C
ATOM	1115	C	THR A 153	21.685	4.594	35.387	1.00	27.75	C
ATOM	1116	O	THR A 153	20.730	3.909	35.712	1.00	27.68	O
ATOM	1117	CB	THR A 153	22.330	5.552	37.584	1.00	28.53	C
ATOM	1118	OG1	THR A 153	21.833	6.836	37.193	1.00	28.91	O
ATOM	1119	CG2	THR A 153	23.473	5.855	38.540	1.00	29.18	C
ATOM	1120	N	VAL A 154	21.766	5.171	34.194	1.00	26.76	N
ATOM	1121	CA	VAL A 154	20.671	4.996	33.246	1.00	26.61	C
ATOM	1122	C	VAL A 154	20.583	3.531	32.895	1.00	26.77	C
ATOM	1123	O	VAL A 154	21.592	2.832	32.923	1.00	27.36	O
ATOM	1124	CB	VAL A 154	20.838	5.826	31.964	1.00	26.05	C
ATOM	1125	CG1	VAL A 154	20.914	7.279	32.312	1.00	26.14	C
ATOM	1126	CG2	VAL A 154	22.071	5.383	31.182	1.00	25.62	C
ATOM	1127	N	GLY A 155	19.379	3.072	32.568	1.00	26.71	N
ATOM	1128	CA	GLY A 155	19.147	1.674	32.252	1.00	26.42	C
ATOM	1129	C	GLY A 155	19.531	1.266	30.840	1.00	26.67	C
ATOM	1130	O	GLY A 155	19.894	2.093	29.983	1.00	26.52	O
ATOM	1131	N	ARG A 156	19.390	-0.028	30.599	1.00	26.49	N
ATOM	1132	CA	ARG A 156	19.811	-0.684	29.364	1.00	26.54	C
ATOM	1133	C	ARG A 156	19.305	-0.053	28.068	1.00	25.95	C
ATOM	1134	O	ARG A 156	20.089	0.194	27.160	1.00	26.26	O
ATOM	1135	CB	ARG A 156	19.429	-2.165	29.418	1.00	26.28	C
ATOM	1136	N	LYS A 157	18.004	0.175	27.964	1.00	25.43	N
ATOM	1137	CA	LYS A 157	17.460	0.777	26.756	1.00	25.11	C
ATOM	1138	C	LYS A 157	18.026	2.198	26.517	1.00	25.50	C
ATOM	1139	O	LYS A 157	18.249	2.595	25.372	1.00	25.14	O
ATOM	1140	CB	LYS A 157	15.927	0.796	26.809	1.00	24.88	C
ATOM	1141	CG	LYS A 157	15.255	-0.572	26.516	1.00	24.25	C
ATOM	1142	N	ILE A 158	18.257	2.956	27.585	1.00	25.35	N
ATOM	1143	CA	ILE A 158	18.766	4.326	27.432	1.00	25.61	C
ATOM	1144	C	ILE A 158	20.205	4.250	26.971	1.00	25.76	C
ATOM	1145	O	ILE A 158	20.661	5.058	26.166	1.00	25.39	O
ATOM	1146	CB	ILE A 158	18.662	5.107	28.740	1.00	25.41	C
ATOM	1147	CG1	ILE A 158	17.202	5.245	29.162	1.00	25.92	C
ATOM	1148	CG2	ILE A 158	19.297	6.475	28.601	1.00	25.61	C
ATOM	1149	CD1	ILE A 158	16.331	5.924	28.174	1.00	27.88	C
ATOM	1150	N	VAL A 159	20.909	3.251	27.481	1.00	26.10	N
ATOM	1151	CA	VAL A 159	22.276	3.010	27.079	1.00	26.57	C
ATOM	1152	C	VAL A 159	22.279	2.703	25.585	1.00	26.40	C
ATOM	1153	O	VAL A 159	23.074	3.248	24.840	1.00	26.32	O
ATOM	1154	CB	VAL A 159	22.895	1.850	27.883	1.00	26.94	C
ATOM	1155	CG1	VAL A 159	24.136	1.310	27.193	1.00	27.73	C
ATOM	1156	CG2	VAL A 159	23.223	2.308	29.298	1.00	26.73	C
ATOM	1157	N	MET A 160	21.363	1.852	25.145	1.00	26.48	N
ATOM	1158	CA	MET A 160	21.270	1.518	23.721	1.00	26.52	C
ATOM	1159	C	MET A 160	20.985	2.771	22.880	1.00	25.02	C
ATOM	1160	O	MET A 160	21.600	2.986	21.845	1.00	24.31	O
ATOM	1161	CB	MET A 160	20.183	0.476	23.485	1.00	27.05	C
ATOM	1162	CG	MET A 160	20.540	-0.900	24.001	1.00	30.45	C
ATOM	1163	SD	MET A 160	21.843	-1.730	23.058	1.00	34.87	S
ATOM	1164	CE	MET A 160	20.957	-2.028	21.496	1.00	36.94	C
ATOM	1165	N	ASP A 161	20.047	3.589	23.342	1.00	23.96	N
ATOM	1166	CA	ASP A 161	19.699	4.831	22.665	1.00	23.14	C
ATOM	1167	C	ASP A 161	20.890	5.781	22.550	1.00	21.93	C
ATOM	1168	O	ASP A 161	21.167	6.323	21.480	1.00	21.41	O
ATOM	1169	CB	ASP A 161	18.549	5.528	23.402	1.00	23.13	C
ATOM	1170	CG	ASP A 161	17.250	4.762	23.293	1.00	24.08	C

ATOM	1171	OD1	ASP	A	161	17.182	3.812	22.478	1.00	21.27	O
ATOM	1172	OD2	ASP	A	161	16.248	5.035	23.980	1.00	25.87	O
ATOM	1173	N	PHE	A	162	21.575	5.973	23.671	1.00	20.59	N
ATOM	1174	CA	PHE	A	162	22.712	6.859	23.765	1.00	19.97	C
ATOM	1175	C	PHE	A	162	23.802	6.409	22.809	1.00	19.19	C
ATOM	1176	O	PHE	A	162	24.410	7.213	22.160	1.00	18.98	O
ATOM	1177	CB	PHE	A	162	23.223	6.859	25.220	1.00	20.44	C
ATOM	1178	CG	PHE	A	162	24.386	7.755	25.470	1.00	20.78	C
ATOM	1179	CD1	PHE	A	162	24.206	9.107	25.673	1.00	25.50	C
ATOM	1180	CD2	PHE	A	162	25.662	7.245	25.542	1.00	23.71	C
ATOM	1181	CE1	PHE	A	162	25.290	9.930	25.935	1.00	25.85	C
ATOM	1182	CE2	PHE	A	162	26.755	8.072	25.795	1.00	24.89	C
ATOM	1183	CZ	PHE	A	162	26.572	9.394	26.001	1.00	23.50	C
ATOM	1184	N	LEU	A	163	24.062	5.115	22.744	1.00	19.25	N
ATOM	1185	CA	LEU	A	163	25.084	4.597	21.838	1.00	19.42	C
ATOM	1186	C	LEU	A	163	24.715	4.804	20.361	1.00	18.63	C
ATOM	1187	O	LEU	A	163	25.585	4.831	19.493	1.00	18.21	O
ATOM	1188	CB	LEU	A	163	25.297	3.115	22.104	1.00	19.49	C
ATOM	1189	CG	LEU	A	163	25.988	2.812	23.422	1.00	20.88	C
ATOM	1190	CD1	LEU	A	163	25.980	1.319	23.651	1.00	22.44	C
ATOM	1191	CD2	LEU	A	163	27.407	3.368	23.396	1.00	21.73	C
ATOM	1192	N	GLY	A	164	23.419	4.917	20.104	1.00	18.01	N
ATOM	1193	CA	GLY	A	164	22.889	5.158	18.779	1.00	18.55	C
ATOM	1194	C	GLY	A	164	22.873	6.622	18.355	1.00	18.40	C
ATOM	1195	O	GLY	A	164	22.406	6.921	17.256	1.00	19.24	O
ATOM	1196	N	PHE	A	165	23.365	7.521	19.209	1.00	17.50	N
ATOM	1197	CA	PHE	A	165	23.493	8.913	18.831	1.00	17.67	C
ATOM	1198	C	PHE	A	165	24.497	8.955	17.663	1.00	17.49	C
ATOM	1199	O	PHE	A	165	25.293	8.028	17.497	1.00	16.10	O
ATOM	1200	CB	PHE	A	165	23.984	9.753	20.018	1.00	17.47	C
ATOM	1201	CG	PHE	A	165	22.932	10.004	21.098	1.00	18.51	C
ATOM	1202	CD1	PHE	A	165	21.645	9.479	21.009	1.00	19.26	C
ATOM	1203	CD2	PHE	A	165	23.242	10.784	22.203	1.00	18.52	C
ATOM	1204	CE1	PHE	A	165	20.697	9.730	21.996	1.00	18.44	C
ATOM	1205	CE2	PHE	A	165	22.303	11.030	23.199	1.00	18.52	C
ATOM	1206	CZ	PHE	A	165	21.032	10.500	23.100	1.00	18.90	C
ATOM	1207	N	ASN	A	166	24.466	10.009	16.854	1.00	17.77	N
ATOM	1208	CA	ASN	A	166	25.393	10.110	15.712	1.00	18.29	C
ATOM	1209	C	ASN	A	166	26.787	10.622	16.129	1.00	18.73	C
ATOM	1210	O	ASN	A	166	27.156	11.795	15.897	1.00	19.54	O
ATOM	1211	CB	ASN	A	166	24.793	10.972	14.598	1.00	17.92	C
ATOM	1212	CG	ASN	A	166	25.571	10.861	13.293	1.00	17.28	C
ATOM	1213	OD1	ASN	A	166	26.679	10.289	13.262	1.00	16.53	O
ATOM	1214	ND2	ASN	A	166	24.994	11.395	12.204	1.00	12.92	N
ATOM	1215	N	TRP	A	167	27.527	9.739	16.789	1.00	19.26	N
ATOM	1216	CA	TRP	A	167	28.867	10.035	17.264	1.00	19.76	C
ATOM	1217	C	TRP	A	167	29.785	10.266	16.084	1.00	19.88	C
ATOM	1218	O	TRP	A	167	30.731	11.031	16.169	1.00	19.35	O
ATOM	1219	CB	TRP	A	167	29.384	8.864	18.130	1.00	19.92	C
ATOM	1220	CG	TRP	A	167	28.556	8.728	19.351	1.00	20.39	C
ATOM	1221	CD1	TRP	A	167	27.686	7.727	19.656	1.00	20.85	C
ATOM	1222	CD2	TRP	A	167	28.445	9.686	20.400	1.00	20.99	C
ATOM	1223	NE1	TRP	A	167	27.059	7.995	20.851	1.00	21.18	N
ATOM	1224	CE2	TRP	A	167	27.509	9.194	21.325	1.00	20.70	C
ATOM	1225	CE3	TRP	A	167	29.065	10.916	20.664	1.00	21.55	C
ATOM	1226	CZ2	TRP	A	167	27.183	9.871	22.488	1.00	22.63	C
ATOM	1227	CZ3	TRP	A	167	28.731	11.589	21.804	1.00	21.78	C
ATOM	1228	CH2	TRP	A	167	27.789	11.071	22.706	1.00	22.79	C
ATOM	1229	N	ASN	A	168	29.529	9.577	14.979	1.00	20.07	N
ATOM	1230	CA	ASN	A	168	30.374	9.759	13.818	1.00	20.50	C
ATOM	1231	C	ASN	A	168	30.396	11.237	13.421	1.00	20.67	C

ATOM	1232	O	ASN A 168	31.465	11.806	13.207	1.00	19.54	O
ATOM	1233	CB	ASN A 168	29.917	8.930	12.628	1.00	20.87	C
ATOM	1234	CG	ASN A 168	30.818	9.129	11.423	1.00	22.96	C
ATOM	1235	OD1	ASN A 168	32.027	8.923	11.522	1.00	25.54	O
ATOM	1236	ND2	ASN A 168	30.247	9.578	10.295	1.00	23.09	N
ATOM	1237	N	TRP A 169	29.211	11.844	13.338	1.00	20.57	N
ATOM	1238	CA	TRP A 169	29.106	13.226	12.917	1.00	20.23	C
ATOM	1239	C	TRP A 169	29.653	14.188	13.972	1.00	20.59	C
ATOM	1240	O	TRP A 169	30.367	15.118	13.634	1.00	20.09	O
ATOM	1241	CB	TRP A 169	27.662	13.618	12.570	1.00	20.35	C
ATOM	1242	CG	TRP A 169	27.542	15.101	12.238	1.00	19.49	C
ATOM	1243	CD1	TRP A 169	27.769	15.693	11.026	1.00	19.03	C
ATOM	1244	CD2	TRP A 169	27.203	16.157	13.137	1.00	20.25	C
ATOM	1245	NE1	TRP A 169	27.578	17.052	11.117	1.00	20.36	N
ATOM	1246	CE2	TRP A 169	27.244	17.366	12.406	1.00	19.45	C
ATOM	1247	CE3	TRP A 169	26.874	16.207	14.492	1.00	20.60	C
ATOM	1248	CZ2	TRP A 169	26.964	18.600	12.975	1.00	21.03	C
ATOM	1249	CZ3	TRP A 169	26.614	17.433	15.064	1.00	23.09	C
ATOM	1250	CH2	TRP A 169	26.649	18.621	14.297	1.00	23.61	C
ATOM	1251	N	ILE A 170	29.326	13.979	15.239	1.00	20.47	N
ATOM	1252	CA	ILE A 170	29.759	14.926	16.241	1.00	20.67	C
ATOM	1253	C	ILE A 170	31.262	14.772	16.567	1.00	21.18	C
ATOM	1254	O	ILE A 170	31.943	15.758	16.836	1.00	21.20	O
ATOM	1255	CB	ILE A 170	28.842	14.892	17.483	1.00	20.61	C
ATOM	1256	CG1	ILE A 170	28.900	16.231	18.221	1.00	20.05	C
ATOM	1257	CG2	ILE A 170	29.191	13.755	18.402	1.00	19.89	C
ATOM	1258	CD1	ILE A 170	27.865	16.353	19.329	1.00	21.00	C
ATOM	1259	N	ASN A 171	31.780	13.556	16.527	1.00	20.74	N
ATOM	1260	CA	ASN A 171	33.214	13.355	16.715	1.00	21.80	C
ATOM	1261	C	ASN A 171	34.024	14.093	15.634	1.00	22.34	C
ATOM	1262	O	ASN A 171	35.093	14.652	15.916	1.00	21.98	O
ATOM	1263	CB	ASN A 171	33.581	11.857	16.718	1.00	21.55	C
ATOM	1264	CG	ASN A 171	33.111	11.124	17.981	1.00	21.20	C
ATOM	1265	OD1	ASN A 171	32.637	11.724	18.963	1.00	21.35	O
ATOM	1266	ND2	ASN A 171	33.263	9.830	17.962	1.00	19.36	N
ATOM	1267	N	LYS A 172	33.529	14.097	14.400	1.00	22.97	N
ATOM	1268	CA	LYS A 172	34.218	14.847	13.353	1.00	24.09	C
ATOM	1269	C	LYS A 172	34.167	16.342	13.656	1.00	23.61	C
ATOM	1270	O	LYS A 172	35.166	17.041	13.511	1.00	23.54	O
ATOM	1271	CB	LYS A 172	33.669	14.529	11.961	1.00	24.58	C
ATOM	1272	CG	LYS A 172	34.087	13.163	11.491	1.00	27.56	C
ATOM	1273	CD	LYS A 172	33.653	12.852	10.034	1.00	31.03	C
ATOM	1274	CE	LYS A 172	34.323	11.576	9.565	1.00	33.01	C
ATOM	1275	NZ	LYS A 172	34.357	11.406	8.070	1.00	36.89	N
ATOM	1276	N	GLN A 173	33.019	16.834	14.109	1.00	23.74	N
ATOM	1277	CA	GLN A 173	32.914	18.245	14.482	1.00	23.87	C
ATOM	1278	C	GLN A 173	33.960	18.578	15.547	1.00	23.86	C
ATOM	1279	O	GLN A 173	34.739	19.500	15.374	1.00	24.25	O
ATOM	1280	CB	GLN A 173	31.517	18.590	14.993	1.00	23.63	C
ATOM	1281	CG	GLN A 173	30.451	18.619	13.916	1.00	24.53	C
ATOM	1282	CD	GLN A 173	30.753	19.634	12.851	1.00	25.08	C
ATOM	1283	OE1	GLN A 173	31.194	20.740	13.157	1.00	26.69	O
ATOM	1284	NE2	GLN A 173	30.512	19.273	11.601	1.00	23.36	N
ATOM	1285	N	GLN A 174	33.963	17.822	16.635	1.00	23.63	N
ATOM	1286	CA	GLN A 174	34.925	17.995	17.717	1.00	23.91	C
ATOM	1287	C	GLN A 174	36.365	18.053	17.161	1.00	24.01	C
ATOM	1288	O	GLN A 174	37.133	18.962	17.480	1.00	23.39	O
ATOM	1289	CB	GLN A 174	34.783	16.840	18.717	1.00	23.67	C
ATOM	1290	CG	GLN A 174	35.688	16.913	19.934	1.00	24.07	C
ATOM	1291	CD	GLN A 174	35.595	15.668	20.799	1.00	25.12	C
ATOM	1292	OE1	GLN A 174	35.229	14.602	20.312	1.00	25.70	O

ATOM	1293	NE2	GLN	A	174	35.901	15.803	22.084	1.00	23.63	N
ATOM	1294	N	GLY	A	175	36.706	17.080	16.334	1.00	23.75	N
ATOM	1295	CA	GLY	A	175	38.005	17.028	15.696	1.00	24.73	C
ATOM	1296	C	GLY	A	175	38.268	18.209	14.768	1.00	25.21	C
ATOM	1297	O	GLY	A	175	39.310	18.842	14.854	1.00	25.60	O
ATOM	1298	N	LYS	A	176	37.327	18.518	13.888	1.00	25.81	N
ATOM	1299	CA	LYS	A	176	37.491	19.634	12.961	1.00	26.88	C
ATOM	1300	C	LYS	A	176	37.719	20.997	13.638	1.00	26.95	C
ATOM	1301	O	LYS	A	176	38.490	21.803	13.136	1.00	26.74	O
ATOM	1302	CB	LYS	A	176	36.256	19.778	12.077	1.00	27.35	C
ATOM	1303	CG	LYS	A	176	36.093	18.716	11.009	1.00	29.87	C
ATOM	1304	CD	LYS	A	176	34.894	19.085	10.137	1.00	33.21	C
ATOM	1305	CE	LYS	A	176	33.948	17.932	9.961	1.00	35.30	C
ATOM	1306	NZ	LYS	A	176	32.558	18.388	9.643	1.00	37.22	N
ATOM	1307	N	ARG	A	177	37.031	21.257	14.749	1.00	26.93	N
ATOM	1308	CA	ARG	A	177	37.153	22.539	15.435	1.00	27.36	C
ATOM	1309	C	ARG	A	177	38.241	22.611	16.509	1.00	26.63	C
ATOM	1310	O	ARG	A	177	38.402	23.650	17.135	1.00	25.85	O
ATOM	1311	CB	ARG	A	177	35.832	22.902	16.114	1.00	27.86	C
ATOM	1312	CG	ARG	A	177	34.625	22.712	15.267	1.00	29.88	C
ATOM	1313	CD	ARG	A	177	34.653	23.460	13.973	1.00	32.39	C
ATOM	1314	NE	ARG	A	177	33.683	22.854	13.084	1.00	34.54	N
ATOM	1315	CZ	ARG	A	177	33.841	22.701	11.790	1.00	37.31	C
ATOM	1316	NH1	ARG	A	177	34.952	23.110	11.189	1.00	38.34	N
ATOM	1317	NH2	ARG	A	177	32.877	22.126	11.088	1.00	38.88	N
ATOM	1318	N	GLY	A	178	38.950	21.510	16.743	1.00	26.35	N
ATOM	1319	CA	GLY	A	178	39.998	21.470	17.753	1.00	25.46	C
ATOM	1320	C	GLY	A	178	39.473	21.514	19.176	1.00	25.27	C
ATOM	1321	O	GLY	A	178	40.213	21.818	20.123	1.00	25.46	O
ATOM	1322	N	TRP	A	179	38.199	21.202	19.359	1.00	24.30	N
ATOM	1323	CA	TRP	A	179	37.639	21.260	20.692	1.00	24.02	C
ATOM	1324	C	TRP	A	179	38.290	20.266	21.638	1.00	23.85	C
ATOM	1325	O	TRP	A	179	38.958	19.333	21.226	1.00	22.62	O
ATOM	1326	CB	TRP	A	179	36.136	21.011	20.674	1.00	23.73	C
ATOM	1327	CG	TRP	A	179	35.346	22.061	19.962	1.00	23.92	C
ATOM	1328	CD1	TRP	A	179	35.787	23.291	19.531	1.00	22.69	C
ATOM	1329	CD2	TRP	A	179	33.968	21.981	19.594	1.00	23.74	C
ATOM	1330	NE1	TRP	A	179	34.765	23.968	18.912	1.00	24.45	N
ATOM	1331	CE2	TRP	A	179	33.636	23.183	18.929	1.00	24.47	C
ATOM	1332	CE3	TRP	A	179	32.984	21.002	19.730	1.00	23.10	C
ATOM	1333	CZ2	TRP	A	179	32.379	23.422	18.414	1.00	23.69	C
ATOM	1334	CZ3	TRP	A	179	31.733	21.241	19.211	1.00	21.89	C
ATOM	1335	CH2	TRP	A	179	31.435	22.445	18.573	1.00	23.90	C
ATOM	1336	N	GLY	A	180	38.080	20.499	22.925	1.00	24.08	N
ATOM	1337	CA	GLY	A	180	38.488	19.558	23.941	1.00	24.08	C
ATOM	1338	C	GLY	A	180	37.437	18.476	24.103	1.00	24.64	C
ATOM	1339	O	GLY	A	180	36.618	18.234	23.202	1.00	24.66	O
ATOM	1340	N	GLN	A	181	37.437	17.830	25.261	1.00	24.77	N
ATOM	1341	CA	GLN	A	181	36.575	16.682	25.471	1.00	25.23	C
ATOM	1342	C	GLN	A	181	35.117	17.039	25.725	1.00	24.50	C
ATOM	1343	O	GLN	A	181	34.779	18.151	26.149	1.00	24.42	O
ATOM	1344	CB	GLN	A	181	37.094	15.847	26.646	1.00	25.76	C
ATOM	1345	CG	GLN	A	181	36.720	16.409	28.025	1.00	28.85	C
ATOM	1346	CD	GLN	A	181	37.046	15.434	29.156	1.00	33.38	C
ATOM	1347	OE1	GLN	A	181	38.186	15.003	29.293	1.00	36.10	O
ATOM	1348	NE2	GLN	A	181	36.044	15.085	29.958	1.00	36.04	N
ATOM	1349	N	LEU	A	182	34.262	16.078	25.423	1.00	23.71	N
ATOM	1350	CA	LEU	A	182	32.857	16.110	25.792	1.00	23.70	C
ATOM	1351	C	LEU	A	182	32.876	16.040	27.317	1.00	22.68	C
ATOM	1352	O	LEU	A	182	33.406	15.079	27.849	1.00	21.72	O
ATOM	1353	CB	LEU	A	182	32.179	14.836	25.273	1.00	23.82	C

ATOM	1354	CG	LEU A 182	30.661	14.693	25.199	1.00	26.38	C
ATOM	1355	CD1	LEU A 182	30.243	13.231	25.368	1.00	26.04	C
ATOM	1356	CD2	LEU A 182	29.977	15.501	26.192	1.00	29.73	C
ATOM	1357	N	THR A 183	32.323	17.031	28.021	1.00	21.93	N
ATOM	1358	CA	THR A 183	32.300	16.971	29.484	1.00	21.44	C
ATOM	1359	C	THR A 183	31.004	16.388	29.984	1.00	21.27	C
ATOM	1360	O	THR A 183	30.972	15.766	31.032	1.00	21.29	O
ATOM	1361	CB	THR A 183	32.490	18.362	30.150	1.00	21.73	C
ATOM	1362	OG1	THR A 183	31.463	19.257	29.715	1.00	20.35	O
ATOM	1363	CG2	THR A 183	33.796	19.015	29.725	1.00	20.91	C
ATOM	1364	N	SER A 184	29.918	16.590	29.251	1.00	21.42	N
ATOM	1365	CA	SER A 184	28.649	16.053	29.689	1.00	21.45	C
ATOM	1366	C	SER A 184	27.537	16.272	28.714	1.00	21.46	C
ATOM	1367	O	SER A 184	27.672	17.031	27.753	1.00	21.17	O
ATOM	1368	CB	SER A 184	28.243	16.687	31.006	1.00	21.74	C
ATOM	1369	OG	SER A 184	27.919	18.049	30.845	1.00	23.24	O
ATOM	1370	N	ASN A 185	26.445	15.575	28.982	1.00	21.21	N
ATOM	1371	CA	ASN A 185	25.216	15.712	28.245	1.00	22.29	C
ATOM	1372	C	ASN A 185	24.154	16.005	29.273	1.00	22.08	C
ATOM	1373	O	ASN A 185	23.886	15.184	30.135	1.00	22.25	O
ATOM	1374	CB	ASN A 185	24.856	14.416	27.497	1.00	22.67	C
ATOM	1375	CG	ASN A 185	25.885	14.037	26.454	1.00	23.57	C
ATOM	1376	OD1	ASN A 185	26.646	13.097	26.655	1.00	27.51	O
ATOM	1377	ND2	ASN A 185	25.905	14.754	25.329	1.00	24.27	N
ATOM	1378	N	LEU A 186	23.574	17.189	29.202	1.00	22.01	N
ATOM	1379	CA	LEU A 186	22.529	17.563	30.135	1.00	22.03	C
ATOM	1380	C	LEU A 186	21.170	17.219	29.558	1.00	22.00	C
ATOM	1381	O	LEU A 186	20.844	17.592	28.435	1.00	22.34	O
ATOM	1382	CB	LEU A 186	22.578	19.065	30.423	1.00	21.68	C
ATOM	1383	CG	LEU A 186	21.707	19.538	31.588	1.00	22.25	C
ATOM	1384	CD1	LEU A 186	22.252	18.985	32.891	1.00	22.43	C
ATOM	1385	CD2	LEU A 186	21.643	21.098	31.648	1.00	23.35	C
ATOM	1386	N	LEU A 187	20.377	16.518	30.344	1.00	22.19	N
ATOM	1387	CA	LEU A 187	19.009	16.198	29.979	1.00	21.95	C
ATOM	1388	C	LEU A 187	18.149	17.286	30.603	1.00	21.91	C
ATOM	1389	O	LEU A 187	18.232	17.521	31.823	1.00	21.61	O
ATOM	1390	CB	LEU A 187	18.616	14.830	30.527	1.00	21.55	C
ATOM	1391	CG	LEU A 187	17.129	14.488	30.477	1.00	22.78	C
ATOM	1392	CD1	LEU A 187	16.616	14.429	29.054	1.00	23.66	C
ATOM	1393	CD2	LEU A 187	16.866	13.143	31.174	1.00	22.84	C
ATOM	1394	N	LEU A 188	17.348	17.956	29.770	1.00	21.56	N
ATOM	1395	CA	LEU A 188	16.461	19.000	30.227	1.00	22.26	C
ATOM	1396	C	LEU A 188	14.993	18.662	29.920	1.00	22.55	C
ATOM	1397	O	LEU A 188	14.588	18.517	28.760	1.00	23.16	O
ATOM	1398	CB	LEU A 188	16.827	20.327	29.562	1.00	22.84	C
ATOM	1399	CG	LEU A 188	18.244	20.840	29.821	1.00	22.60	C
ATOM	1400	CD1	LEU A 188	18.967	21.111	28.523	1.00	23.92	C
ATOM	1401	CD2	LEU A 188	18.177	22.088	30.655	1.00	24.56	C
ATOM	1402	N	ILE A 189	14.181	18.577	30.958	1.00	22.15	N
ATOM	1403	CA	ILE A 189	12.769	18.315	30.756	1.00	22.34	C
ATOM	1404	C	ILE A 189	11.996	19.395	31.460	1.00	22.37	C
ATOM	1405	O	ILE A 189	12.072	19.528	32.692	1.00	22.77	O
ATOM	1406	CB	ILE A 189	12.377	16.953	31.281	1.00	21.60	C
ATOM	1407	CG1	ILE A 189	13.254	15.888	30.638	1.00	21.85	C
ATOM	1408	CG2	ILE A 189	10.928	16.708	30.958	1.00	22.51	C
ATOM	1409	CD1	ILE A 189	12.918	14.425	31.075	1.00	23.06	C
ATOM	1410	N	GLY A 190	11.276	20.186	30.673	1.00	22.37	N
ATOM	1411	CA	GLY A 190	10.587	21.336	31.206	1.00	22.29	C
ATOM	1412	C	GLY A 190	9.124	21.342	30.902	1.00	22.48	C
ATOM	1413	O	GLY A 190	8.652	20.633	30.007	1.00	22.39	O
ATOM	1414	N	MET A 191	8.402	22.134	31.687	1.00	22.74	N

ATOM	1415	CA	MET A 191	6.991	22.339	31.467	1.00	23.16	C
ATOM	1416	C	MET A 191	6.838	23.482	30.478	1.00	22.94	C
ATOM	1417	O	MET A 191	7.738	24.329	30.338	1.00	23.03	O
ATOM	1418	CB	MET A 191	6.283	22.673	32.784	1.00	23.69	C
ATOM	1419	CG	MET A 191	6.224	21.513	33.741	1.00	25.02	C
ATOM	1420	SD	MET A 191	5.664	21.927	35.415	1.00	28.11	S
ATOM	1421	CE	MET A 191	4.016	22.460	35.097	1.00	28.35	C
ATOM	1422	N	GLU A 192	5.712	23.492	29.773	1.00	22.60	N
ATOM	1423	CA	GLU A 192	5.410	24.544	28.810	1.00	22.83	C
ATOM	1424	C	GLU A 192	5.495	25.895	29.490	1.00	22.51	C
ATOM	1425	O	GLU A 192	5.062	26.046	30.614	1.00	22.41	O
ATOM	1426	CB	GLU A 192	4.005	24.342	28.249	1.00	22.86	C
ATOM	1427	CG	GLU A 192	2.925	24.367	29.315	1.00	24.36	C
ATOM	1428	CD	GLU A 192	1.572	23.891	28.814	1.00	25.71	C
ATOM	1429	OE1	GLU A 192	1.503	23.294	27.718	1.00	25.51	O
ATOM	1430	OE2	GLU A 192	0.582	24.128	29.525	1.00	26.30	O
ATOM	1431	N	GLY A 193	6.069	26.888	28.828	1.00	22.95	N
ATOM	1432	CA	GLY A 193	6.185	28.199	29.444	1.00	22.50	C
ATOM	1433	C	GLY A 193	7.465	28.414	30.254	1.00	22.36	C
ATOM	1434	O	GLY A 193	7.756	29.544	30.602	1.00	23.08	O
ATOM	1435	N	ASN A 194	8.219	27.361	30.566	1.00	21.60	N
ATOM	1436	CA	ASN A 194	9.456	27.506	31.341	1.00	21.44	C
ATOM	1437	C	ASN A 194	10.489	28.320	30.581	1.00	21.19	C
ATOM	1438	O	ASN A 194	10.635	28.134	29.372	1.00	22.08	O
ATOM	1439	CB	ASN A 194	10.099	26.147	31.629	1.00	21.05	C
ATOM	1440	CG	ASN A 194	9.494	25.435	32.801	1.00	20.86	C
ATOM	1441	OD1	ASN A 194	8.509	25.883	33.385	1.00	22.48	O
ATOM	1442	ND2	ASN A 194	10.092	24.312	33.167	1.00	17.74	N
ATOM	1443	N	VAL A 195	11.213	29.183	31.290	1.00	20.69	N
ATOM	1444	CA	VAL A 195	12.268	29.993	30.701	1.00	20.84	C
ATOM	1445	C	VAL A 195	13.572	29.854	31.450	1.00	20.06	C
ATOM	1446	O	VAL A 195	13.601	29.874	32.681	1.00	20.75	O
ATOM	1447	CB	VAL A 195	11.903	31.502	30.686	1.00	21.41	C
ATOM	1448	CG1	VAL A 195	13.081	32.357	30.219	1.00	22.24	C
ATOM	1449	CG2	VAL A 195	10.666	31.767	29.843	1.00	22.30	C
ATOM	1450	N	THR A 196	14.651	29.673	30.702	1.00	19.51	N
ATOM	1451	CA	THR A 196	15.993	29.737	31.257	1.00	19.52	C
ATOM	1452	C	THR A 196	16.487	31.117	30.820	1.00	19.98	C
ATOM	1453	O	THR A 196	16.653	31.352	29.620	1.00	19.56	O
ATOM	1454	CB	THR A 196	16.896	28.677	30.675	1.00	19.26	C
ATOM	1455	OG1	THR A 196	16.526	27.366	31.162	1.00	21.13	O
ATOM	1456	CG2	THR A 196	18.309	28.886	31.185	1.00	19.85	C
ATOM	1457	N	PRO A 197	16.627	32.043	31.767	1.00	20.27	N
ATOM	1458	CA	PRO A 197	17.046	33.412	31.463	1.00	20.52	C
ATOM	1459	C	PRO A 197	18.431	33.497	30.836	1.00	20.89	C
ATOM	1460	O	PRO A 197	19.277	32.609	31.025	1.00	20.66	O
ATOM	1461	CB	PRO A 197	17.018	34.099	32.825	1.00	21.22	C
ATOM	1462	CG	PRO A 197	16.144	33.263	33.657	1.00	21.01	C
ATOM	1463	CD	PRO A 197	16.309	31.872	33.189	1.00	20.28	C
ATOM	1464	N	ALA A 198	18.633	34.577	30.089	1.00	20.28	N
ATOM	1465	CA	ALA A 198	19.841	34.817	29.341	1.00	20.22	C
ATOM	1466	C	ALA A 198	21.130	34.634	30.146	1.00	20.58	C
ATOM	1467	O	ALA A 198	21.284	35.186	31.235	1.00	19.91	O
ATOM	1468	CB	ALA A 198	19.791	36.222	28.759	1.00	20.52	C
ATOM	1469	N	HIS A 199	22.062	33.891	29.563	1.00	20.87	N
ATOM	1470	CA	HIS A 199	23.371	33.646	30.158	1.00	21.41	C
ATOM	1471	C	HIS A 199	24.281	33.168	29.063	1.00	21.82	C
ATOM	1472	O	HIS A 199	23.826	32.892	27.943	1.00	21.80	O
ATOM	1473	CB	HIS A 199	23.305	32.534	31.198	1.00	21.44	C
ATOM	1474	CG	HIS A 199	22.915	31.220	30.617	1.00	22.21	C
ATOM	1475	ND1	HIS A 199	21.619	30.940	30.253	1.00	21.93	N

ATOM	1476	CD2	HIS A 199	23.644	30.120	30.296	1.00	22.04	C
ATOM	1477	CE1	HIS A 199	21.561	29.721	29.749	1.00	23.76	C
ATOM	1478	NE2	HIS A 199	22.777	29.214	29.737	1.00	22.57	N
ATOM	1479	N	TYR A 200	25.568	33.060	29.384	1.00	22.40	N
ATOM	1480	CA	TYR A 200	26.536	32.456	28.469	1.00	22.34	C
ATOM	1481	C	TYR A 200	27.225	31.316	29.197	1.00	22.03	C
ATOM	1482	O	TYR A 200	27.328	31.330	30.425	1.00	21.90	O
ATOM	1483	CB	TYR A 200	27.544	33.458	27.924	1.00	22.22	C
ATOM	1484	CG	TYR A 200	28.517	34.051	28.924	1.00	22.16	C
ATOM	1485	CD1	TYR A 200	29.746	33.454	29.171	1.00	21.36	C
ATOM	1486	CD2	TYR A 200	28.236	35.246	29.565	1.00	22.58	C
ATOM	1487	CE1	TYR A 200	30.638	33.997	30.052	1.00	21.48	C
ATOM	1488	CE2	TYR A 200	29.128	35.806	30.462	1.00	21.46	C
ATOM	1489	CZ	TYR A 200	30.334	35.189	30.695	1.00	22.03	C
ATOM	1490	OH	TYR A 200	31.230	35.733	31.593	1.00	20.69	O
ATOM	1491	N	ASP A 201	27.681	30.310	28.444	1.00	22.42	N
ATOM	1492	CA	ASP A 201	28.381	29.152	29.048	1.00	22.10	C
ATOM	1493	C	ASP A 201	29.801	29.142	28.531	1.00	21.96	C
ATOM	1494	O	ASP A 201	30.018	29.601	27.433	1.00	22.26	O
ATOM	1495	CB	ASP A 201	27.722	27.840	28.661	1.00	21.97	C
ATOM	1496	CG	ASP A 201	26.311	27.714	29.181	1.00	21.99	C
ATOM	1497	OD1	ASP A 201	26.126	27.649	30.421	1.00	22.61	O
ATOM	1498	OD2	ASP A 201	25.330	27.624	28.412	1.00	19.35	O
ATOM	1499	N	GLU A 202	30.769	28.620	29.283	1.00	21.66	N
ATOM	1500	CA	GLU A 202	32.146	28.612	28.773	1.00	23.16	C
ATOM	1501	C	GLU A 202	32.515	27.334	28.035	1.00	23.38	C
ATOM	1502	O	GLU A 202	33.684	26.951	28.049	1.00	25.48	O
ATOM	1503	CB	GLU A 202	33.178	28.774	29.897	1.00	23.46	C
ATOM	1504	CG	GLU A 202	33.110	30.064	30.681	1.00	26.52	C
ATOM	1505	CD	GLU A 202	34.233	30.132	31.704	1.00	28.11	C
ATOM	1506	OE1	GLU A 202	34.207	29.387	32.698	1.00	29.06	O
ATOM	1507	OE2	GLU A 202	35.148	30.920	31.490	1.00	31.04	O
ATOM	1508	N	GLN A 203	31.538	26.632	27.476	1.00	22.70	N
ATOM	1509	CA	GLN A 203	31.808	25.451	26.685	1.00	22.01	C
ATOM	1510	C	GLN A 203	31.049	25.576	25.373	1.00	21.93	C
ATOM	1511	O	GLN A 203	30.113	26.378	25.253	1.00	22.49	O
ATOM	1512	CB	GLN A 203	31.409	24.169	27.427	1.00	22.02	C
ATOM	1513	CG	GLN A 203	32.287	23.822	28.657	1.00	22.33	C
ATOM	1514	CD	GLN A 203	32.103	22.379	29.165	1.00	23.14	C
ATOM	1515	OE1	GLN A 203	31.948	21.448	28.370	1.00	21.46	O
ATOM	1516	NE2	GLN A 203	32.138	22.203	30.489	1.00	21.21	N
ATOM	1517	N	GLN A 204	31.486	24.807	24.380	1.00	21.81	N
ATOM	1518	CA	GLN A 204	30.806	24.720	23.092	1.00	21.45	C
ATOM	1519	C	GLN A 204	29.610	23.799	23.295	1.00	21.12	C
ATOM	1520	O	GLN A 204	29.673	22.862	24.088	1.00	20.29	O
ATOM	1521	CB	GLN A 204	31.740	24.140	22.040	1.00	21.75	C
ATOM	1522	CG	GLN A 204	33.033	24.928	21.852	1.00	21.56	C
ATOM	1523	CD	GLN A 204	32.856	26.198	21.000	1.00	21.57	C
ATOM	1524	OE1	GLN A 204	31.741	26.609	20.692	1.00	20.30	O
ATOM	1525	NE2	GLN A 204	33.966	26.776	20.594	1.00	18.60	N
ATOM	1526	N	ASN A 205	28.522	24.060	22.580	1.00	21.25	N
ATOM	1527	CA	ASN A 205	27.291	23.316	22.795	1.00	21.04	C
ATOM	1528	C	ASN A 205	26.529	22.977	21.526	1.00	21.25	C
ATOM	1529	O	ASN A 205	26.160	23.880	20.747	1.00	20.22	O
ATOM	1530	CB	ASN A 205	26.387	24.194	23.654	1.00	21.95	C
ATOM	1531	CG	ASN A 205	25.116	23.507	24.098	1.00	21.98	C
ATOM	1532	OD1	ASN A 205	24.759	22.418	23.643	1.00	21.21	O
ATOM	1533	ND2	ASN A 205	24.400	24.178	24.979	1.00	17.72	N
ATOM	1534	N	PHE A 206	26.314	21.677	21.319	1.00	19.90	N
ATOM	1535	CA	PHE A 206	25.339	21.230	20.354	1.00	19.77	C
ATOM	1536	C	PHE A 206	24.085	20.869	21.150	1.00	19.25	C

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ATOM   1537  O    PHE A 206    24.094  19.939  21.959  1.00 19.15        O
ATOM   1538  CB   PHE A 206    25.849  20.049  19.545  1.00 20.09        C
ATOM   1539  CG   PHE A 206    26.786  20.442  18.454  1.00 19.77        C
ATOM   1540  CD1  PHE A 206    26.371  21.294  17.453  1.00 22.21        C
ATOM   1541  CD2  PHE A 206    28.079  19.973  18.435  1.00 20.21        C
ATOM  ·1542  CE1  PHE A·206    27.213  21.643  16.434  1.00 22.06        C
ATOM   1543  CE2  PHE A 206    28.941  20.336  17.418  1.00 20.66        C
ATOM   1544  CZ   PHE A 206    28.504  21.190  16.427  1.00 22.18        C
ATOM   1545  N    PHE A 207    23.009  21.596  20.869  1.00 18.42        N
ATOM   1546  CA   PHE A 207    21.760  21.590  21.620  1.00 18.78        C
ATOM   1547  C    PHE A 207    20.732  20.841  20.804  1.00 19.36        C
ATOM   1548  O    PHE A 207    20.241  21.359  19.818  1.00 19.26        O
ATOM   1549  CB   PHE A 207    21.366  23.063  21.836  1.00 18.70        C
ATOM   1550  CG   PHE A 207    20.120  23.301  22.635  1.00 17.94        C
ATOM   1551  CD1  PHE A 207    18.899  23.404  22.007  1.00 17.78        C
ATOM   1552  CD2  PHE A 207    20.188  23.548  23.989  1.00 18.50        C
ATOM   1553  CE1  PHE A 207    17.772  23.684  22.713  1.00 19.52        C
ATOM   1554  CE2  PHE A 207    19.052  23.823  24.705  1.00 20.66        C
ATOM   1555  CZ   PHE A 207    17.836  23.909  24.053  1.00 19.44        C
ATOM   1556  N    ALA A 208    20.435  19.618  21.234  1.00 19.90        N
ATOM   1557  CA   ALA A 208    19.628  18.670  20.469  1.00 20.17        C
ATOM   1558  C    ALA A 208    18.210 ·18.541  20.991  1.00 20.52        C
ATOM   1559  O    ALA A 208    17.971  17.946  22.047  1.00 20.61        O
ATOM   1560  CB   ALA A 208    20.294  17.308  20.494  1.00 19.33        C
ATOM   1561  N    GLN A 209    17.270  19.076  20.219  1.00 20.94        N
ATOM   1562  CA   GLN A 209    15.880  19.062  20.627  1.00 20.82        C
ATOM   1563  C    GLN A 209    15.227  17.712  20.323  1.00 20.75        C
ATOM   1564  O    GLN A 209    15.401  17.129  19.224  1.00 19.59        O
ATOM   1565  CB   GLN A 209    15.141  20.216  19.961  1.00 20.91        C
ATOM   1566  CG   GLN A 209    13.735  20.431  20.463  1.00 20.52        C
ATOM   1567  CD   GLN A 209    13.673  20.840  21.928  1.00 20.69        C
ATOM  .1568  OE1  GLN A 209    14.702  21.155  22.562  1.00 19.72        O
ATOM   1569  NE2  GLN A 209    12.460  20.852  22.473  1.00 19.21        N
ATOM   1570  N    ILE A 210    14.442  17.248  21.296  1.00 20.72        N
ATOM   1571  CA   ILE A 210    13.853  15.922  21.252  1.00 21.43        C
ATOM   1572  C    ILE A 210    12.334  15.911  21.292  1.00 21.72        C
ATOM   1573  O    ILE A 210    11.728  15.195  20.534  1.00 22.12        O
ATOM   1574  CB   ILE A 210    14.396  15.095  22.424  1.00 21.84        C
ATOM   1575  CG1  ILE A 210    15.859  14.733  22.156  1.00 22.48        C
ATOM   1576  CG2  ILE A 210    13.581  13.832  22.622  1.00 21.83        C
ATOM   1577  CD1  ILE A 210    16.631  14.354  23.382  1.00 24.34        C
ATOM   1578  N    LYS A 211    11.728  16.677  22.188  1.00 22.08        N
ATOM   1579  CA   LYS A 211    10.279  16.715  22.319  1.00 21.72        C
ATOM   1580  C    LYS A 211     9.858  18.130  22.564  1.00 21.67        C
ATOM   1581  O    LYS A 211    10.468  18.841  23.372  1.00 20.87        O
ATOM   1582  CB   LYS A 211     9.797  15.856  23.487  1.00 22.44        C
ATOM   1583  CG   LYS A 211 ·   8.267  15.562  23.479  1.00 23.29        C
ATOM   1584  CD   LYS A 211·    7.791  15.022  24.824  1.00 25.02        C
ATOM   1585  CE   LYS A 211     6.494  14.215  24.757  1.00 26.00        C
ATOM   1586  NZ   LYS A 211     5.561  14.522  23.634  1.00 26.43        N
ATOM   1587  N    GLY A 212     8.798  18.541  21.875  1.00 21.35        N
ATOM   1588  CA   GLY A 212     8.306  19.891  21.994  1.00 21.71        C
ATOM   1589  C    GLY A 212     9.195  20.906  21.297  1.00 21.63        C
ATOM   1590  O    GLY A 212    10.150  20.572  20.591  1.00 21.32        O
ATOM   1591  N    TYR A 213     8.871  22.166  21.522  1.00 22.35        N
ATOM   1592  CA   TYR A 213     9.533  23.279  20.862  1.00 22.42        C
ATOM   1593  C    TYR A 213    10.028  24.293  21.868  1.00 22.33        C
ATOM   1594  O    TYR A 213     9.340  24.589  22.853  1.00 21.55        O
ATOM   1595  CB   TYR A 213     8.556  23.951  19.916  1.00 23.46        C
ATOM   1596  CG   TYR A 213     8.114  23.034  18.815  1.00 24.81        C
ATOM   1597  CD1  TYR A 213     7.100  22.112  19.020  1.00 28.16        C
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ATOM	1598	CD2	TYR	A	213	8.751	23.051	17.589	1.00	26.74	C
ATOM	1599	CE1	TYR	A	213	6.716	21.237	18.011	1.00	28.91	C
ATOM	1600	CE2	TYR	A	213	8.378	22.193	16.585	1.00	28.63	C
ATOM	1601	CZ	TYR	A	213	7.366	21.295	16.795	1.00	29.44	C
ATOM	1602	OH	TYR	A	213	7.013	20.456	15.756	1.00	33.67	O
ATOM	1603	N	LYS	A	214	11.239	24.788	21.609	1.00	21.60	N
ATOM	1604	CA	LYS	A	214	11.875	25.793	22.414	1.00	21.89	C
ATOM	1605	C	LYS	A	214	12.312	26.947	21.528	1.00	21.62	C
ATOM	1606	O	LYS	A	214	12.878	26.747	20.442	1.00	22.07	O
ATOM	1607	CB	LYS	A	214	13.103	25.239	23.140	1.00	22.10	C
ATOM	1608	CG	LYS	A	214	12.796	24.385	24.338	1.00	22.63	C
ATOM	1609	CD	LYS	A	214	14.103	23.893	24.964	1.00	24.24	C
ATOM	1610	CE	LYS	A	214	13.923	23.478	26.402	1.00	23.54	C
ATOM	1611	NZ	LYS	A	214	15.169	22.872	26.951	1.00	22.10	N
ATOM	1612	N	ARG	A	215	12.007	28.156	21.974	1.00	20.97	N
ATOM	1613	CA	ARG	A	215	12.447	29.347	21.277	1.00	20.73	C
ATOM	1614	C	ARG	A	215	13.778	29.724	21.900	1.00	20.03	C
ATOM	1615	O	ARG	A	215	13.885	29.828	23.113	1.00	19.70	O
ATOM	1616	CB	ARG	A	215	11.461	30.470	21.493	1.00	21.30	C
ATOM	1617	CG	ARG	A	215	11.754	31.760	20.726	1.00	22.21	C
ATOM	1618	CD	ARG	A	215	11.177	32.925	21.473	1.00	24.71	C
ATOM	1619	NE	ARG	A	215	11.122	34.156	20.715	1.00	25.47	N
ATOM	1620	CZ	ARG	A	215	10.479	35.235	21.130	1.00	26.28	C
ATOM	1621	NH1	ARG	A	215	9.844	35.245	22.299	1.00	26.07	N
ATOM	1622	NH2	ARG	A	215	10.483	36.314	20.384	1.00	28.83	N
ATOM	1623	N	CYS	A	216	14.794	29.877	21.074	1.00	19.45	N
ATOM	1624	CA	CYS	A	216	16.116	30.219	21.554	1.00	19.58	C
ATOM	1625	C	CYS	A	216	16.503	31.587	20.993	1.00	19.92	C
ATOM	1626	O	CYS	A	216	16.503	31.774	19.789	1.00	20.16	O
ATOM	1627	CB	CYS	A	216	17.110	29.186	21.073	1.00	20.01	C
ATOM	1628	SG	CYS	A	216	16.693	27.450	21.462	1.00	21.39	S
ATOM	1629	N	ILE	A	217	16.812	32.530	21.878	1.00	19.28	N
ATOM	1630	CA	ILE	A	217	17.286	33.845	21.504	1.00	19.58	C
ATOM	1631	C	ILE	A	217	18.742	33.961	21.937	1.00	19.21	C
ATOM	1632	O	ILE	A	217	19.055	33.849	23.126	1.00	19.05	O
ATOM	1633	CB	ILE	A	217	16.424	34.943	22.168	1.00	19.88	C
ATOM	1634	CG1	ILE	A	217	14.926	34.687	21.878	1.00	20.56	C
ATOM	1635	CG2	ILE	A	217	16.803	36.312	21.627	1.00	20.25	C
ATOM	1636	CD1	ILE	A	217	13.984	35.692	22.488	1.00	20.99	C
ATOM	1637	N	LEU	A	218	19.620	34.176	20.965	1.00	19.01	N
ATOM	1638	CA	LEU	A	218	21.048	34.271	21.222	1.00	19.61	C
ATOM	1639	C	LEU	A	218	21.568	35.682	20.970	1.00	20.43	C
ATOM	1640	O	LEU	A	218	21.018	36.414	20.136	1.00	19.76	O
ATOM	1641	CB	LEU	A	218	21.816	33.329	20.308	1.00	19.66	C
ATOM	1642	CG	LEU	A	218	21.906	31.881	20.778	1.00	19.74	C
ATOM	1643	CD1	LEU	A	218	20.549	31.237	20.905	1.00	20.56	C
ATOM	1644	CD2	LEU	A	218	22.733	31.099	19.798	1.00	21.32	C
ATOM	1645	N	PHE	A	219	22.626	36.046	21.700	1.00	20.11	N
ATOM	1646	CA	PHE	A	219	23.282	37.324	21.524	1.00	20.96	C
ATOM	1647	C	PHE	A	219	24.805	37.078	21.453	1.00	21.19	C
ATOM	1648	O	PHE	A	219	25.351	36.313	22.257	1.00	21.20	O
ATOM	1649	CB	PHE	A	219	22.942	38.304	22.678	1.00	20.97	C
ATOM	1650	CG	PHE	A	219	21.463	38.456	22.954	1.00	20.44	C
ATOM	1651	CD1	PHE	A	219	20.821	37.637	23.846	1.00	21.46	C
ATOM	1652	CD2	PHE	A	219	20.724	39.447	22.334	1.00	22.49	C
ATOM	1653	CE1	PHE	A	219	19.472	37.790	24.108	1.00	22.33	C
ATOM	1654	CE2	PHE	A	219	19.387	39.605	22.605	1.00	21.32	C
ATOM	1655	CZ	PHE	A	219	18.760	38.773	23.480	1.00	21.50	C
ATOM	1656	N	PRO	A	220	25.485	37.705	20.498	1.00	21.20	N
ATOM	1657	CA	PRO	A	220	26.936	37.541	20.368	1.00	21.72	C
ATOM	1658	C	PRO	A	220	27.683	38.108	21.569	1.00	21.31	C

ATOM	1659	O	PRO	A	220	27.165	38.972	22.280	1.00	20.90	O
ATOM	1660	CB	PRO	A	220	27.302	38.341	19.120	1.00	21.41	C
ATOM	1661	CG	PRO	A	220	26.020	38.781	18.510	1.00	23.12	C
ATOM	1662	CD	PRO	A	220	24.938	38.637	19.508	1.00	22.22	C
ATOM	1663	N	PRO	A	221	28.884	37.594	21.806	1.00	21.46	N
ATOM	1664	CA	PRO	A	221	29.721	38.053	22.918	1.00	21.33	C
ATOM	1665	C	PRO	A	221	29.961	39.556	22.940	1.00	21.04	C
ATOM	1666	O	PRO	A	221	30.220	40.096	24.009	1.00	20.68	O
ATOM	1667	CB	PRO	A	221	31.032	37.325	22.681	1.00	21.42	C
ATOM	1668	CG	PRO	A	221	30.656	36.134	21.939	1.00	22.42	C
ATOM	1669	CD	PRO	A	221	29.522	36.510	21.041	1.00	21.53	C
ATOM	1670	N	ASP	A	222	29.877	40.225	21.792	1.00	21.47	N
ATOM	1671	CA	ASP	A	222	30.128	41.669	21.749	1.00	21.80	C
ATOM	1672	C	ASP	A	222	28.946	42.464	22.271	1.00	21.74	C
ATOM	1673	O	ASP	A	222	28.970	43.685	22.261	1.00	22.16	O
ATOM	1674	CB	ASP	A	222	30.568	42.148	20.355	1.00	21.85	C
ATOM	1675	CG	ASP	A	222	29.433	42.151	19.325	1.00	24.83	C
ATOM	1676	OD1	ASP	A	222	28.311	41.668	19.585	1.00	25.32	O
ATOM	1677	OD2	ASP	A	222	29.595	42.607	18.186	1.00	29.30	O
ATOM	1678	N	GLN	A	223	27.916	41.775	22.748	1.00	21.94	N
ATOM	1679	CA	GLN	A	223	26.794	42.453	23.388	1.00	22.17	C
ATOM	1680	C	GLN	A	223	26.897	42.388	24.928	1.00	21.93	C
ATOM	1681	O	GLN	A	223	25.926	42.681	25.660	1.00	21.70	O
ATOM	1682	CB	GLN	A	223	25.456	41.911	22.832	1.00	22.84	C
ATOM	1683	CG	GLN	A	223	25.149	42.508	21.412	1.00	25.34	C
ATOM	1684	CD	GLN	A	223	23.728	42.283	20.965	1.00	27.81	C
ATOM	1685	OE1	GLN	A	223	22.801	42.473	21.750	1.00	30.00	O
ATOM	1686	NE2	GLN	A	223	23.543	41.850	19.709	1.00	29.69	N
ATOM	1687	N	PHE	A	224	28.079	42.027	25.417	1.00	21.04	N
ATOM	1688	CA	PHE	A	224	28.363	42.035	26.860	1.00	21.41	C
ATOM	1689	C	PHE	A	224	27.886	43.350	27.527	1.00	21.57	C
ATOM	1690	O	PHE	A	224	27.240	43.315	28.561	1.00	21.34	O
ATOM	1691	CB	PHE	A	224	29.883	41.874	27.076	1.00	20.95	C
ATOM	1692	CG	PHE	A	224	30.304	41.773	28.529	1.00	21.82	C
ATOM	1693	CD1	PHE	A	224	30.452	42.912	29.319	1.00	19.33	C
ATOM	1694	CD2	PHE	A	224	30.595	40.552	29.089	1.00	20.01	C
ATOM	1695	CE1	PHE	A	224	30.870	42.807	30.630	1.00	20.89	C
ATOM	1696	CE2	PHE	A	224	31.025	40.449	30.397	1.00	20.59	C
ATOM	1697	CZ	PHE	A	224	31.151	41.579	31.171	1.00	20.99	C
ATOM	1698	N	GLU	A	225	28.195	44.495	26.916	1.00	22.10	N
ATOM	1699	CA	GLU	A	225	27.823	45.800	27.466	1.00	23.01	C
ATOM	1700	C	GLU	A	225	26.337	46.042	27.574	1.00	22.26	C
ATOM	1701	O	GLU	A	225	25.928	46.946	28.311	1.00	21.91	O
ATOM	1702	CB	GLU	A	225	28.401	46.935	26.624	1.00	24.27	C
ATOM	1703	CG	GLU	A	225	29.886	47.133	26.857	1.00	29.26	C
ATOM	1704	CD	GLU	A	225	30.312	48.579	27.062	1.00	35.91	C
ATOM	1705	OE1	GLU	A	225	29.745	49.317	27.942	1.00	39.92	O
ATOM	1706	OE2	GLU	A	225	31.281	48.958	26.368	1.00	40.78	O
ATOM	1707	N	CYS	A	226	25.539	45.258	26.836	1.00	21.15	N
ATOM	1708	CA	CYS	A	226	24.081	45.396	26.851	1.00	21.01	C
ATOM	1709	C	CYS	A	226	23.359	44.417	27.768	1.00	20.67	C
ATOM	1710	O	CYS	A	226	22.159	44.601	28.043	1.00	18.85	O
ATOM	1711	CB	CYS	A	226	23.520	45.190	25.447	1.00	20.88	C
ATOM	1712	SG	CYS	A	226	24.194	46.296	24.190	1.00	22.39	S
ATOM	1713	N	LEU	A	227	24.085	43.399	28.256	1.00	20.56	N
ATOM	1714	CA	LEU	A	227	23.461	42.304	28.985	1.00	20.48	C
ATOM	1715	C	LEU	A	227	23.795	42.185	30.466	1.00	20.42	C
ATOM	1716	O	LEU	A	227	23.180	41.398	31.187	1.00	20.78	O
ATOM	1717	CB	LEU	A	227	23.737	41.003	28.232	1.00	21.20	C
ATOM	1718	CG	LEU	A	227	22.865	40.993	26.963	1.00	22.96	C
ATOM	1719	CD1	LEU	A	227	23.373	40.023	25.929	1.00	24.99	C

ATOM	1720	CD2	LEU	A	227	21.420	40.655	27.323	1.00	24.79	C
ATOM	1721	N	TYR	A	228	24.793	42.939	30.901	1.00	20.08	N
ATOM	1722	CA	TYR	A	228	25.060	43.127	32.303	1.00	19.66	C
ATOM	1723	C	TYR	A	228	25.061	41.858	33.165	1.00	19.95	C
ATOM	1724	O	TYR	A	228	24.229	41.697	34.058	1.00	19.69	O
ATOM	1725	CB	TYR	A	228	24.050	44.137	32.857	1.00	19.77	C
ATOM	1726	CG	TYR	A	228	24.028	45.481	32.119	1.00	19.37	C
ATOM	1727	CD1	TYR	A	228	24.836	46.513	32.515	1.00	18.65	C
ATOM	1728	CD2	TYR	A	228	23.180	45.697	31.036	1.00	19.82	C
ATOM	1729	CE1	TYR	A	228	24.819	47.759	31.862	1.00	20.56	C
ATOM	1730	CE2	TYR	A	228	23.143	46.920	30.380	1.00	20.78	C
ATOM	1731	CZ	TYR	A	228	23.962	47.956	30.801	1.00	20.88	C
ATOM	1732	OH	TYR	A	228	23.944	49.174	30.152	1.00	19.73	O
ATOM	1733	N	PRO	A	229	26.028	40.981	32.941	1.00	19.99	N
ATOM	1734	CA	PRO	A	229	26.140	39.781	33.768	1.00	20.44	C
ATOM	1735	C	PRO	A	229	26.481	40.141	35.196	1.00	19.99	C
ATOM	1736	O	PRO	A	229	27.130	41.166	35.451	1.00	20.03	O
ATOM	1737	CB	PRO	A	229	27.334	39.043	33.157	1.00	20.11	C
ATOM	1738	CG	PRO	A	229	28.125	40.130	32.541	1.00	21.04	C
ATOM	1739	CD	PRO	A	229	27.099	41.050	31.935	1.00	19.79	C
ATOM	1740	N	TYR	A	230	26.044	39.294	36.115	1.00	19.50	N
ATOM	1741	CA	TYR	A	230	26.348	39.458	37.511	1.00	19.17	C
ATOM	1742	C	TYR	A	230	27.860	39.464	37.704	1.00	19.14	C
ATOM	1743	O	TYR	A	230	28.598	39.060	36.832	1.00	18.83	O
ATOM	1744	CB	TYR	A	230	25.746	38.313	38.320	1.00	18.51	C
ATOM	1745	CG	TYR	A	230	24.253	38.411	38.531	1.00	18.95	C
ATOM	1746	CD1	TYR	A	230	23.368	37.949	37.560	1.00	18.39	C
ATOM.	1747	CD2	TYR	A	230	23.719	38.969	39.707	1.00	18.65	C
ATOM	1748	CE1	TYR	A	230	22.001	38.006	37.751	1.00	17.34	C
ATOM	1749	CE2	TYR	A	230	22.337	39.043	39.903	1.00	17.05	C
ATOM	1750	CZ	TYR	A	230	21.492	38.550	38.909	1.00	17.79	C
ATOM	1751	OH	TYR	A	230	20.127	38.601	39.051	1.00	19.77	O
ATOM	1752	N	PRO	A	231	28.316	39.963	38.843	1.00	19.95	N
ATOM	1753	CA	PRO	A	231	29.722	39.829	39.213	1.00	20.42	C
ATOM	1754	C	PRO	A	231	30.157	38.339	39.187	1.00	20.93	C
ATOM	1755	O	PRO	A	231	29.345	37.463	39.506	1.00	20.71	O
ATOM	1756	CB	PRO	A	231	29.755	40.369	40.642	1.00	20.70	C
ATOM	1757	CG	PRO	A	231	28.588	41.341	40.716	1.00	20.76	C
ATOM	1758	CD	PRO	A	231	27.528	40.701	39.845	1.00	19.53	C
ATOM	1759	N	VAL	A	232	31.413	38.067	38.831	1.00	20.93	N
ATOM	1760	CA	VAL	A	232	31.906	36.685	38.742	1.00	21.31	C
ATOM	1761	C	VAL	A	232	31.722	35.843	40.014	1.00	20.95	C
ATOM	1762	O	VAL	A	232	31.431	34.650	39.934	1.00	20.50	O
ATOM	1763	CB	VAL	A	232	33.398	36.655	38.304	1.00	21.35	C
ATOM	1764	CG1	VAL	A	232	34.029	35.280	38.552	1.00	22.23	C
ATOM	1765	CG2	VAL	A	232	33.533	37.031	36.850	1.00	21.71	C
ATOM	1766	N	HIS	A	233	31.872	36.455	41.181	1.00	21.10	N
ATOM	1767	CA	HIS	A	233	31.742	35.721	42.438	1.00	21.01	C
ATOM	1768	C	HIS	A	233	30.302	35.571	42.944	1.00	20.95	C
ATOM	1769	O	HIS	A	233	30.045	34.864	43.914	1.00	19.92	O
ATOM	1770	CB	HIS	A	233	32.606	36.363	43.501	1.00	21.12	C
ATOM	1771	CG	HIS	A	233	34.063	36.342	43.174	1.00	21.52	C
ATOM	1772	ND1	HIS	A	233	34.720	37.424	42.625	1.00	22.78	N
ATOM	1773	CD2	HIS	A	233	34.993	35.368	43.318	1.00	22.27	C
ATOM	1774	CE1	HIS	A	233	35.994	37.114	42.446	1.00	24.00	C
ATOM	1775	NE2	HIS	A	233	36.186	35.870	42.857	1.00	23.34	N
ATOM	1776	N	HIS	A	234	29.364	36.236	42.288	1.00	20.94	N
ATOM	1777	CA	HIS	A	234	27.959	36.081	42.630	1.00	21.27	C
ATOM	1778	C	HIS	A	234	27.493	34.722	42.103	1.00	21.28	C
ATOM	1779	O	HIS	A	234	28.022	34.233	41.107	1.00	21.02	O
ATOM	1780	CB	HIS	A	234	27.169	37.203	41.989	1.00	21.52	C

ATOM	1781	CG	HIS A 234	25.730	37.253	42.374	1.00	21.54	C
ATOM	1782	ND1	HIS A 234	24.769	36.498	41.740	1.00	21.95	N
ATOM	1783	CD2	HIS A 234	25.073	38.028	43.269	1.00	22.67	C
ATOM	1784	CE1	HIS A 234	23.585	36.779	42.254	1.00	22.38	C
ATOM	1785	NE2	HIS A 234	23.743	37.700	43.187	1.00	21.91	N
ATOM	1786	N	PRO A 235	26.551	34.087	42.792	1.00	21.11	N
ATOM	1787	CA	PRO A 235	25.999	32.809	42.338	1.00	21.46	C
ATOM	1788	C	PRO A 235	25.461	32.835	40.916	1.00	21.10	C
ATOM	1789	O	PRO A 235	25.517	31.802	40.244	1.00	20.37	O
ATOM	1790	CB	PRO A 235	24.860	32.551	43.325	1.00	21.90	C
ATOM	1791	CG	PRO A 235	25.316	33.240	44.574	1.00	22.00	C
ATOM	1792	CD	PRO A 235	26.007	34.485	44.100	1.00	21.41	C
ATOM	1793	N	CYS A 236	24.997	33.989	40.452	1.00	20.41	N
ATOM	1794	CA	CYS A 236	24.456	34.077	39.110	1.00	20.17	C
ATOM	1795	C	CYS A 236	25.503	34.554	38.107	1.00	20.00	C
ATOM	1796	O	CYS A 236	25.180	35.111	37.061	1.00	20.30	O
ATOM	1797	CB	CYS A 236	23.195	34.924	39.090	1.00	19.66	C
ATOM	1798	SG	CYS A 236	21.914	34.209	40.133	1.00	20.71	S
ATOM	1799	N	ASP A 237	26.768	34.311	38.433	1.00	19.87	N
ATOM	1800	CA	ASP A 237	27.857	34.498	37.485	1.00	19.60	C
ATOM	1801	C	ASP A 237	27.459	33.915	36.105	1.00	19.48	C
ATOM	1802	O	ASP A 237	26.883	32.834	36.020	1.00	18.94	O
ATOM	1803	CB	ASP A 237	29.075	33.789	38.031	1.00	19.20	C
ATOM	1804	CG	ASP A 237	30.268	33.842	37.107	1.00	20.58	C
ATOM	1805	OD1	ASP A 237	30.477	34.871	36.373	1.00	18.56	O
ATOM	1806	OD2	ASP A 237	31.070	32.868	37.077	1.00	19.51	O
ATOM	1807	N	ARG A 238	27.749	34.675	35.056	1.00	19.85	N
ATOM	1808	CA	ARG A 238	27.459	34.332	33.664	1.00	20.90	C
ATOM	1809	C	ARG A 238	26.002	34.572	33.247	1.00	20.67	C
ATOM	1810	O	ARG A 238	25.709	34.491	32.059	1.00	21.20	O
ATOM	1811	CB	ARG A 238	27.854	32.876	33.319	1.00	21.44	C
ATOM	1812	CG	ARG A 238	29.330	32.585	33.482	1.00	21.04	C
ATOM	1813	CD	ARG A 238	29.710	31.150	33.145	1.00	22.38	C
ATOM	1814	NE	ARG A 238	29.080	30.243	34.085	1.00	23.86	N
ATOM	1815	CZ	ARG A 238	27.937	29.584	33.874	1.00	25.81	C
ATOM	1816	NH1	ARG A 238	27.262	29.686	32.712	1.00	24.18	N
ATOM	1817	NH2	ARG A 238	27.471	28.810	34.849	1.00	27.18	N
ATOM	1818	N	GLN A 239	25.105	34.845	34.190	1.00	19.94	N
ATOM	1819	CA	GLN A 239	23.722	35.141	33.833	1.00	20.58	C
ATOM	1820	C	GLN A 239	23.535	36.661	33.740	1.00	20.50	C
ATOM	1821	O	GLN A 239	24.219	37.402	34.446	1.00	20.63	O
ATOM	1822	CB	GLN A 239	22.735	34.591	34.863	1.00	20.32	C
ATOM	1823	CG	GLN A 239	23.159	33.314	35.594	1.00	20.84	C
ATOM	1824	CD	GLN A 239	23.367	32.137	34.673	1.00	21.23	C
ATOM	1825	OE1	GLN A 239	22.434	31.675	34.014	1.00	21.22	O
ATOM	1826	NE2	GLN A 239	24.591	31.655	34.616	1.00	20.93	N
ATOM	1827	N	SER A 240	22.600	37.112	32.900	1.00	20.07	N
ATOM	1828	CA	SER A 240	22.282	38.533	32.768	1.00	20.18	C
ATOM	1829	C	SER A 240	21.498	39.027	33.969	1.00	20.71	C
ATOM	1830	O	SER A 240	20.619	38.316	34.467	1.00	20.85	O
ATOM	1831	CB	SER A 240	21.405	38.776	31.539	1.00	20.29	C
ATOM	1832	OG	SER A 240	21.007	40.137	31.454	1.00	21.43	O
ATOM	1833	N	GLN A 241	21.793	40.246	34.426	1.00	20.46	N
ATOM	1834	CA	GLN A 241	21.013	40.839	35.496	1.00	20.42	C
ATOM	1835	C	GLN A 241	19.711	41.433	34.965	1.00	20.26	C
ATOM	1836	O	GLN A 241	18.839	41.767	35.726	1.00	19.62	O
ATOM	1837	CB	GLN A 241	21.770	41.949	36.201	1.00	20.32	C
ATOM	1838	CG	GLN A 241	23.019	41.544	36.912	1.00	20.58	C
ATOM	1839	CD	GLN A 241	23.771	42.767	37.423	1.00	21.94	C
ATOM	1840	OE1	GLN A 241	23.524	43.210	38.514	1.00	23.52	O
ATOM	1841	NE2	GLN A 241	24.670	43.304	36.624	1.00	20.84	N

ATOM	1842	N	VAL A 242	19.557	41.563	33.659	1.00	20.57	N
ATOM	1843	CA	VAL A 242	18.361	42.229	33.182	1.00	20.73	C
ATOM	1844	C	VAL A 242	17.173	41.309	33.246	1.00	20.69	C
ATOM	1845	O	VAL A 242	17.244	40.190	32.757	1.00	21.13	O
ATOM	1846	CB	VAL A 242	18.498	42.667	31.712	1.00	21.03	C
ATOM	1847	CG1	VAL A· 242	17.204	43.377	31.250	1.00	20.85	C
ATOM·	1848	CG2	VAL A 242	19.723	43.527	31.498	1.00	20.71	C
ATOM	1849	N	ASP A 243	16.071	41.786	33.813	1.00	20.62	N
ATOM	1850	CA	ASP A 243	14.807	41.042	33.788	1.00	20.64	C
ATOM	1851	C	ASP A 243	14.148	41.348	32.448	1.00	20.94	C
ATOM	1852	O	ASP A 243	13.591	42.438	32.230	1.00	19.75	O
ATOM	1853	CB	ASP A 243	13.916	41.471	34.963	1.00	20.88	C
ATOM	1854	CG	ASP A 243	12.526	40.894	34.898	1.00	21.39	C
ATOM	1855	OD1	ASP A 243	12.209	40.153	33.941	1.00	23.25	O
ATOM	1856	OD2	ASP A 243	11.672	41.130	35.784	1.00	23.49	O
ATOM	1857	N	PHE A 244	14.238	40.385	31.541	1.00	21.19	N
ATOM	1858	CA	PHE A 244	13.717	40.549	30.197	1.00	21.56	C
ATOM	1859	C	PHE A 244	12.225	40.916	30.204	1.00	22.49	C
ATOM	1860	O	PHE A 244	11.734	41.521	29.260	1.00	21.85	O
ATOM	1861	CB	PHE A 244	13.940	39.275	29.378	1.00	21.85	C
ATOM	1862	CG	PHE A 244	15.316	39.152	28.743	1.00	20.87	C
ATOM	1863	CD1	PHE A 244	16.457	39.540	29.399	1.00	20.74	C
ATOM	1864	CD2	PHE A 244	15.446	38.617	27.483	1.00	21.00	C
ATOM	1865	CE1	PHE A 244	17.691	39.407	28.810	1.00	19.77	C
ATOM	·1866	CE2	PHE A 244	16.687	38.470	26.890	1.00	20.94	C
ATOM	1867	CZ	PHE A 244	17.805	38.881	27.551	1.00	20.34	C
ATOM	1868	N	ASP A 245	11.500	40.554	31.259	1.00	23.56	N
ATOM	1869	CA	ASP A 245	10.072	40.831	31.311	1.00	24.26	C
ATOM	1870	C	ASP A 245	9.794	42.256	31.814	1.00	24.66	C
ATOM	1871	O	ASP A 245	·8.·711	42.762	31.607	1.00	24.21	O
ATOM	1872	CB	ASP A 245	9.353	39.841	32.222	1.00	24.74	C
ATOM	1873	CG	ASP A 245	9.408	38.427	31.721	1.00	26.56	C
ATOM	1874	OD1	ASP A 245	9.368	38.210	30.493	1.00	28.81	O
ATOM	1875	OD2	ASP A 245	9.489	37.455	32.498	1.00	28.39	O
ATOM	1876	N	ASN A 246	10.758	42.876	32.492	1.00	24.80	N
ATOM	1877	CA	ASN A 246	10.605	44.244	32.989	1.00	25.56	C
ATOM	1878	C	ASN A 246	11.960	44.902	33.106	1.00	25.31	C
ATOM	1879	O	ASN A 246	12.500	45.064	34.205	1.00	25.43	O
ATOM	1880	CB	ASN A 246	9.912	44.285	34.345	1.00	26.09	C
ATOM	1881	CG	ASN A 246	9.555	45.716	34.765	1.00	29.59	C
ATOM	1882	OD1	ASN A 246	9.366	46.598	33.912	1.00	32.67	O
ATOM	1883	ND2	ASN A 246	9.468	45.954	36.075	1.00	33.42	N
ATOM	1884	N	PRO A 247	12.525	45.257	31.961	1.00	25.08	N
ATOM	1885	CA	PRO A 247	13.885	45.782	31.911	1.00	24.89	C
ATOM	1886	C	PRO A 247	13.992	47.144	32.579	1.00	24.95	C
ATOM	1887	O	PRO A 247	13.217	48.049	32.297	1.00	24.55	O
ATOM	1888	CB	PRO A 247	14.182	45.899	30.413	1.00	25.05	C
ATOM	1889	CG	PRO·A 247	13.016	45.325	29.702	1.00	25.39	C
ATOM	1890	CD	PRO A 247	11.890	45.184	30.640	1.00	25.02	C
ATOM	1891	N	ASP A 248	14.976	47.267	33.460	1.00	24.53	N
ATOM	1892	CA	ASP A 248	15.216	48.489	34.167	1.00	24.65	C
ATOM	1893	C	ASP A 248	16.271	49.284	33.389	1.00	24.54	C
ATOM	1894	O	ASP A 248	17.472	49.077	33.552	1.00	23.15	O
ATOM	1895	CB	ASP A 248	15.706	48.144	35.564	1.00	24.64	C
ATOM	1896	CG	ASP A 248	15.787	49.343	36.454	1.00	26.02	C
ATOM	1897	OD1	ASP A 248	16.035	50.466	35.944	1.00	26.95	O
ATOM	1898	OD2	ASP A 248	15.609	49.249	37.684	1.00	27.69	O
ATOM	1899	N	TYR A 249	15.812	50.181	32.525	1.00	24.81	N
ATOM	1900	CA	TYR A 249	16.720	50.936	31.673	1.00	25.45	C
ATOM	1901	C	TYR A 249	17.573	51.954	32.426	1.00	25.90	C
ATOM	1902	O	TYR A 249	18.585	52.421	31.897	1.00	25.80	O

ATOM	1903	CB	TYR	A	249	15.948	51.615	30.544	1.00	25.57	C
ATOM	1904	CG	TYR	A	249	15.244	50.651	29.630	1.00	24.58	C
ATOM	1905	CD1	TYR	A	249	15.930	49.624	29.003	1.00	25.44	C
ATOM	1906	CD2	TYR	A	249	13.890	50.764	29.404	1.00	24.48	C
ATOM	1907	CE1	TYR	A	249	15.276	48.731	28.173	1.00	25.01	C
ATOM	1908	CE2	TYR	A·	249	13.234	49.892	28.583	1.00	24.43	C
·ATOM	1909	CZ	TYR	A	249	13.927	48.883	27.969	1.00	24.47	C
ATOM	1910	OH	TYR	A	249	13.252	48.043	27.142	1.00	25.97	O
ATOM	1911	N	GLU	A	250	17.195	52.278	33.660	1.00	26.10	N
ATOM	1912	CA	GLU	A	250	17.999	53.190	34.458	1.00	26.93	C
ATOM	1913	C	GLU	A	250	19.259	52.492	34.929	1.00	25.85	C
ATOM	1914	O	GLU	A	250	20.329	53.086	34.964	1.00	25.90	O
ATOM	1915	CB	GLU	A	250	17.219	53.740	35.661	1.00	27.56	C
ATOM	1916	CG	GLU	A	250	16.021	54.576	35.246	1.00	32.34	C
ATOM	1917	CD	GLU·	A	250	15.420	55.366	36.385	1.00	36.85	C
ATOM	1918	OE1	GLU	A	250	15.945	55.309	37.516	1.00	42.35	O
ATOM	1919	OE2	GLU	A	250	14.422	56.057	36.142	1.00	40.82	O
ATOM	1920	N	ARG	A	251	19.136	51.233	35.315	1.00	24.58	N
ATOM	1921	CA	ARG	A	251	20.297	50.502	35.756	1.00	23.76	C
ATOM	1922	C	ARG	A	251	21.030	49.909	34.568	1.00	22.91	C
ATOM	.1923	O	ARG	A	251	22.242	49.773	34.602	1.00	22.42	O
ATOM	1924	CB	ARG	A	251	19.896	49.374	36.696	1.00	24.55	C
ATOM	1925	CG	ARG	A	251	19.421	49.802	38.077	1.00	25.88	C
ATOM	1926	CD	ARG	A	251	18.894	48.629	38.921	1.00	29.50	C
ATOM	1927	NE	ARG	A	251	19.993	47.764	39.349	1.00	31.63	N
ATOM	1928	CZ	ARG	A	251	19.894	46.467	39.623	1.00	33.13	C
ATOM	1929	NH1	ARG	A	251	18.736	45.826	39.521	1.00	33.12	N
ATOM	1930	NH2	ARG	A	251	20.978	45.805	39.998	1.00	33.93	N
ATOM	1931	N	PHE	A	252	20.300	49.560	33.515	1.00	21.47	N
ATOM	1932	CA	PHE	A	252	20.898	48.863	32.379	1.00	21.32	C
ATOM	1933	C	PHE	A	252	20.576	49.552	31.056	1.00	20.68	C
·ATOM	1934	O	PHE	A	252	19.934	48.984	30.187	1.00	20.79	O
ATOM	1935	CB	PHE	A	252	20.355	47.434	32.344	1.00	21.09	C
ATOM	1936	CG	PHE	A	252	20.373	46.738	33.690	1.00	20.96	C
ATOM	1937	CD1	PHE	A	252	21.555	46.560	34.376	1.00	19.28	C
ATOM	1938	CD2	PHE	A	252	19.207	46.238	34.247	1.00	21.43	C
ATOM	1939	CE1	PHE	A	252	21.571	45.891	35.609	1.00	20.54	C
ATOM	1940	CE2	PHE	A	252	19.217	45.588	35.488	1.00	22.13	C
ATOM	1941	CZ	PHE	A	252	20.403	45.414	36.156	1.00	20.96	·C
ATOM	1942	N	PRO	A	253	21.057	50.767	30.884	1.00	20.56	N
ATOM	1943	CA	PRO	A	253	20.658	51.566	29.714	1.00	20.38	C
ATOM	1944	C	PRO	A	253	20.984	50.916	28.361	1.00	20.20	C
ATOM	1945	O	PRO	A	253	20.191	51.053	27.428	1.00	19.48	O
ATOM	1946	CB	PRO	A	253	21.383	52.903	29.928	1.00	19.77	C
ATOM	1947	CG	PRO	A	253	22.562	52.555	30.895	1.00	20.60	C
ATOM	1948	CD	PRO	A	253	21.986	51.484	31.782	1.00	20.69	C
ATOM	1949	N	ASN	A	254	22.091	50.187	28.240	1.00	20.32	N
ATOM	1950	CA	ASN	A	254	22.409	49.613	26.938	1.00	20.12	C
ATOM	1951	C	ASN	A	254	21.572	48.393	26.554	1.00	19.96	C
ATOM	1952	O	ASN	A	254	21.675	47.892	25.441	1.00	19.16	O
ATOM	1953	CB	ASN	A	254	·23.893	49.336	26.784	1.00	20.06	C
ATOM	1954	CG	ASN	A	254	24.706	50.601	26.697	1.00	21.51	C
ATOM	1955	OD1	ASN	A	254	25.502	50.896	27.598	1.00	23.96	O
ATOM	1956	ND2	ASN	A	254	24.514	51.373	25.614	1.00	20.38	N
ATOM	1957	N	PHE	A	255	20.724	47.922	27.455	1.00	19.81	N
ATOM	1958	CA	PHE	A	255	19.807	46.858	27.063	1.00	19.54	C
ATOM	1959	C	PHE	A	255	18.855	47.384	25.977	1.00	19.69	C
ATOM	1960	O	PHE	A	255	18.194	46.606	25.274	1.00	19.77	O
ATOM	1961	CB	PHE	A	255	19.023	46.330	28.252	1.00	19.22	C
ATOM	1962	CG	PHE	A	255	18.269	45.105	27.940	1.00	20.47	C
ATOM	1963·	CD1	PHE	A	255	18.928	43.922	27.736	1.00	·20.23	C

ATOM	1964	CD2	PHE	A	255	16.909	45.148	27.758	1.00	20.13	C
ATOM	1965	CE1	PHE	A	255	18.243	42.786	27.416	1.00	21.65	C
ATOM	1966	CE2	PHE	A	255	16.227	44.023	27.432	1.00	20.73	C
ATOM	1967	CZ	PHE	A	255	16.886	42.842	27.257	1.00	22.63	C
ATOM	1968	N	GLN	A	256	18.790	48.707	25.841	1.00	19.89	N
ATOM	1969	CA	GLN	A	256	17.969	49.345	24.794	1.00	20.24	C
ATOM	1970	C	GLN	A	256	18.595	49.160	23.403	1.00	19.74	C
ATOM	1971	O	GLN	A	256	17.969	49.443	22.384	1.00	19.92	O
ATOM	1972	CB	GLN	A	256	17.778	50.849	25.095	1.00	20.01	C
ATOM	1973	CG	GLN	A	256	16.736	51.095	26.197	1.00	21.20	C
ATOM	1974	CD	GLN	A	256	16.741	52.513	26.764	1.00	22.14	C
ATOM	1975	OE1	GLN	A	256	15.711	53.195	26.741	1.00	23.01	O
ATOM	1976	NE2	GLN	A	256	17.874	52.943	27.298	1.00	21.42	N
ATOM	1977	N	ASN	A	257	19.845	48.716	23.385	1.00	19.66	N
ATOM	1978	CA	ASN	A	257	20.580	48.485	22.155	1.00	20.07	C
ATOM	1979	C	ASN	A	257	20.757	47.005	21.811	1.00	20.73	C
ATOM	1980	O	ASN	A	257	21.416	46.694	20.823	1.00	20.96	O
ATOM	1981	CB	ASN	A	257	21.969	49.100	22.232	1.00	19.17	C
ATOM	1982	CG	ASN	A	257	21.941	50.550	22.635	1.00	20.82	C
ATOM	1983	OD1	ASN	A	257	22.413	50.902	23.722	1.00	21.51	O
ATOM	1984	ND2	ASN	A	257	21.396	51.407	21.763	1.00	16.92	N
ATOM	1985	N	VAL	A	258	20.190	46.098	22.596	1.00	21.59	N
ATOM	1986	CA	VAL	A	258	20.410	44.660	22.347	1.00	23.34	C
ATOM	1987	C	VAL	A	258	19.671	44.172	21.112	1.00	23.85	C
ATOM	1988	O	VAL	A	258	18.549	44.611	20.818	1.00	24.10	O
ATOM	1989	CB	VAL	A	258	20.015	43.806	23.573	1.00	23.68	C
ATOM	1990	CG1	VAL	A	258	18.507	43.720	23.685	1.00	24.12	C
ATOM	1991	CG2	VAL	A	258	20.570	42.436	23.445	1.00	28.30	C
ATOM	1992	N	VAL	A	259	20.314	43.286	20.360	1.00	24.47	N
ATOM	1993	CA	VAL	A	259	19.705	42.721	19.154	1.00	24.91	C
ATOM	1994	C	VAL	A	259	20.004	41.215	19.140	1.00	24.93	C
ATOM	1995	O	VAL	A	259	21.152	40.829	19.119	1.00	25.32	O
ATOM	1996	CB	VAL	A	259	20.281	43.362	17.895	1.00	24.88	C
ATOM	1997	CG1	VAL	A	259	19.667	42.738	16.670	1.00	26.38	C
ATOM	1998	CG2	VAL	A	259	20.051	44.869	17.909	1.00	24.83	C
ATOM	1999	N	GLY	A	260	18.974	40.381	19.186	1.00	25.06	N
ATOM	2000	CA	GLY	A	260	19.166	38.944	19.232	1.00	25.64	C
ATOM	2001	C	GLY	A	260	19.076	38.221	17.887	1.00	25.42	C
ATOM	2002	O	GLY	A	260	18.679	38.796	16.869	1.00	25.77	O
ATOM	2003	N	TYR	A	261	19.497	36.965	17.907	1.00	25.04	N
ATOM	2004	CA	TYR	A	261	19.380	36.049	16.792	1.00	25.30	C
ATOM	2005	C	TYR	A	261	18.428	34.973	17.328	1.00	24.63	C
ATOM	2006	O	TYR	A	261	18.676	34.417	18.392	1.00	24.77	O
ATOM	2007	CB	TYR	A	261	20.729	35.414	16.482	1.00	25.84	C
ATOM	2008	CG	TYR	A	261	21.750	36.315	15.825	1.00	28.57	C
ATOM	2009	CD1	TYR	A	261	21.821	36.423	14.447	1.00	34.41	C
ATOM	2010	CD2	TYR	A	261	22.631	37.049	16.574	1.00	29.87	C
ATOM	2011	CE1	TYR	A	261	22.752	37.255	13.838	1.00	35.64	C
ATOM	2012	CE2	TYR	A	261	23.576	37.852	15.986	1.00	32.26	C
ATOM	2013	CZ	TYR	A	261	23.644	37.949	14.623	1.00	34.92	C
ATOM	2014	OH	TYR	A	261	24.582	38.772	14.047	1.00	38.39	O
ATOM	2015	N	GLU	A	262	17.325	34.698	16.658	1.00	23.64	N
ATOM	2016	CA	GLU	A	262	16.376	33.758	17.244	1.00	24.03	C
ATOM	2017	C	GLU	A	262	15.933	32.660	16.306	1.00	23.15	C
ATOM	2018	O	GLU	A	262	16.063	32.766	15.078	1.00	22.51	O
ATOM	2019	CB	GLU	A	262	15.172	34.482	17.861	1.00	24.11	C
ATOM	2020	CG	GLU	A	262	13.899	34.502	17.057	1.00	26.35	C
ATOM	2021	CD	GLU	A	262	12.744	35.177	17.785	1.00	27.98	C
ATOM	2022	OE1	GLU	A	262	12.743	36.415	17.872	1.00	27.19	O
ATOM	2023	OE2	GLU	A	262	11.818	34.476	18.254	1.00	29.21	O
ATOM	2024	N	THR	A	263	15.455	31.587	16.917	1.00	22.58	N

ATOM	2025	CA	THR	A	263	14.939	30.458	16.170	1.00	22.52	C
ATOM	2026	C	THR	A	263	14.047	29.617	17.076	1.00	22.48	C
ATOM	2027	O	THR	A	263	14.107	29.712	18.313	1.00	22.14	O
ATOM	2028	CB	THR	A	263	16.117	29.607	15.659	1.00	22.55	C
ATOM	2029	OG1	THR	A	263	15.665	28.666	14.675	1.00	22.25	O
ATOM	2030	CG2	THR	A	263	16.693	28.743	16.770	1.00	22.79	C
ATOM	2031	N	VAL	A	264	13.208	28.797	16.472	1.00	21.62	N
ATOM	2032	CA	VAL	A	264	12.453	27.860	17.263	1.00	22.45	C
ATOM	2033	C	VAL	A	264	12.871	26.474	16.837	1.00	22.76	C
ATOM	2034	O	VAL	A	264	12.779	26.134	15.673	1.00	22.77	O
ATOM	2035	CB	VAL	A	264	10.964	28.027	17.087	1.00	23.08	C
ATOM	2036	CG1	VAL	A	264	10.234	26.805	17.643	1.00	23.67	C
ATOM	2037	CG2	VAL	A	264	10.499	29.344	17.767	1.00	22.75	C
ATOM	2038	N	VAL	A	265	13.389	25.695	17.777	1.00	22.93	N
ATOM	2039	CA	VAL	A	265	13.779	24.329	17.458	1.00	23.08	C
ATOM	2040	C	VAL	A	265	12.738	23.317	17.886	1.00	22.86	C
ATOM	2041	O	VAL	A	265	12.105	23.473	18.932	1.00	23.06	O
ATOM	2042	CB	VAL	A	265	15.143	23.937	18.075	1.00	22.94	C
ATOM	2043	CG1	VAL	A	265	16.243	24.745	17.404	1.00	23.66	C
ATOM	2044	CG2	VAL	A	265	15.169	24.122	19.592	1.00	22.99	C
ATOM	2045	N	GLY	A	266	12.574	22.290	17.056	1.00	21.77	N
ATOM	2046	CA	GLY	A	266	11.683	21.178	17.355	1.00	21.98	C
ATOM	2047	C	GLY	A	266	12.376	19.826	17.263	1.00	20.97	C
ATOM	2048	O	GLY	A	266	13.562	19.757	16.999	1.00	20.63	O
ATOM	2049	N	PRO	A	267	11.643	18.737	17.461	1.00	21.23	N
ATOM	2050	CA	PRO	A	267	12.253	17.403	17.427	1.00	20.68	C
ATOM	2051	C	PRO	A	267	13.126	17.183	16.203	1.00	20.04	C
ATOM	2052	O	PRO	A	267	12.666	17.371	15.081	1.00	19.35	O
ATOM	2053	CB	PRO	A	267	11.039	16.463	17.379	1.00	21.29	C
ATOM	2054	CG	PRO	A	267	9.970	17.202	18.037	1.00	22.85	C
ATOM	2055	CD	PRO	A	267	10.188	18.676	17.710	1.00	21.61	C
ATOM	2056	N	GLY	A	268	14.376	16.787	16.411	1.00	20.31	N
ATOM	2057	CA	GLY	A	268	15.278	16.518	15.305	1.00	19.95	C
ATOM	2058	C	GLY	A	268	16.256	17.627	14.993	1.00	20.50	C
ATOM	2059	O	GLY	A	268	17.277	17.400	14.311	1.00	21.62	O
ATOM	2060	N	ASP	A	269	15.965	18.831	15.477	1.00	19.81	N
ATOM	2061	CA	ASP	A	269	16.818	19.977	15.217	1.00	19.75	C
ATOM	2062	C	ASP	A	269	17.970	20.003	16.215	1.00	19.67	C
ATOM	2063	O	ASP	A	269	17.811	19.625	17.377	1.00	18.76	O
ATOM	2064	CB	ASP	A	269	16.032	21.288	15.386	1.00	19.99	C
ATOM	2065	CG	ASP	A	269	14.916	21.464	14.374	1.00	20.91	C
ATOM	2066	OD1	ASP	A	269	14.935	20.842	13.287	1.00	22.13	O
ATOM	2067	OD2	ASP	A	269	13.987	22.259	14.576	1.00	23.27	O
ATOM	2068	N	VAL	A	270	19.116	20.481	15.746	1.00	19.56	N
ATOM	2069	CA	VAL	A	270	20.276	20.700	16.595	1.00	19.57	C
ATOM	2070	C	VAL	A	270	20.747	22.137	16.444	1.00	19.33	C
ATOM	2071	O	VAL	A	270	21.033	22.594	15.352	1.00	19.78	O
ATOM	2072	CB	VAL	A	270	21.404	19.776	16.215	1.00	19.55	C
ATOM	2073	CG1	VAL	A	270	22.646	20.154	16.966	1.00	20.05	C
ATOM	2074	CG2	VAL	A	270	21.001	18.342	16.535	1.00	19.44	C
ATOM	2075	N	LEU	A	271	20.786	22.870	17.539	1.00	19.33	N
ATOM	2076	CA	LEU	A	271	21.263	24.229	17.501	1.00	19.02	C
ATOM	2077	C	LEU	A	271	22.677	24.272	18.036	1.00	19.15	C
ATOM	2078	O	LEU	A	271	22.961	23.787	19.130	1.00	18.74	O
ATOM	2079	CB	LEU	A	271	20.376	25.120	18.331	1.00	19.93	C
ATOM	2080	CG	LEU	A	271	20.892	26.549	18.573	1.00	20.11	C
ATOM	2081	CD1	LEU	A	271	21.011	27.358	17.296	1.00	19.41	C
ATOM	2082	CD2	LEU	A	271	19.979	27.245	19.555	1.00	20.25	C
ATOM	2083	N	TYR	A	272	23.582	24.818	17.244	1.00	19.15	N
ATOM	2084	CA	TYR	A	272	24.924	25.051	17.718	1.00	19.70	C
ATOM	2085	C	TYR	A	272	24.914	26.360	18.483	1.00	19.63	C

ATOM	2086	O	TYR	A	272	24.646	27.395	17.897	1.00	20.44
ATOM	2087	CB	TYR	A	272	25.908	25.172	16.547	1.00	19.86
ATOM	2088	CG	TYR	A	272	27.293	25.654	16.962	1.00	21.59
ATOM	2089	CD1	TYR	A	272	27.952	25.093	18.048	1.00	22.02
ATOM	2090	CD2	TYR	A	272	27.936	26.668	16.278	1.00	20.87
ATOM	2091	CE1	TYR	A	272	29.214	25.522	18.421	1.00	19.87
ATOM	2092	CE2	TYR	A	272	29.200	27.098	16.649	1.00	20.88
ATOM	2093	CZ	TYR	A	272	29.834	26.517	17.721	1.00	21.07
ATOM	2094	OH	TYR	A	272	31.091	26.937	18.104	1.00	18.93
ATOM	2095	N	ILE	A	273	25.210	26.308	19.776	1.00	19.80
ATOM	2096	CA	ILE	A	273	25.342	27.500	20.598	1.00	20.12
ATOM	2097	C	ILE	A	273	26.837	27.683	20.883	1.00	20.39
ATOM	2098	O	ILE	A	273	27.393	27.000	21.760	1.00	19.88
ATOM	2099	CB	ILE	A	273	24.576	27.366	21.901	1.00	19.72
ATOM	2100	CG1	ILE	A	273	23.111	27.045	21.624	1.00	20.57
ATOM	2101	CG2	ILE	A	273	24.661	28.695	22.696	1.00	20.99
ATOM	2102	CD1	ILE	A	273	22.296	26.797	22.876	1.00	20.93
ATOM	2103	N	PRO	A	274	27.487	28.611	20.182	1.00	20.23
ATOM	2104	CA	PRO	A	274	28.938	28.743	20.326	1.00	21.16
ATOM	2105	C	PRO	A	274	29.289	29.264	21.704	1.00	21.39
ATOM	2106	O	PRO	A	274	28.520	30.027	22.317	1.00	20.89
ATOM	2107	CB	PRO	A	274	29.353	29.757	19.230	1.00	21.62
ATOM	2108	CG	PRO	A	274	28.089	30.056	18.410	1.00	21.22
ATOM	2109	CD	PRO	A	274	26.919	29.621	19.282	1.00	20.51
ATOM	2110	N	MET	A	275	30.450	28.831	22.180	1.00	21.53
ATOM	2111	CA	MET	A	275	30.953	29.207	23.479	1.00	22.30
ATOM	2112	C	MET	A	275	30.920	30.734	23.636	1.00	21.94
ATOM	2113	O	MET	A	275	31.160	31.442	22.675	1.00	20.78
ATOM	2114	CB	MET	A	275	32.367	28.695	23.589	1.00	23.06
ATOM	2115	CG	MET	A	275	32.937	28.734	24.966	1.00	27.00
ATOM	2116	SD	MET	A	275	34.545	27.926	24.991	1.00	33.74
ATOM	2117	CE	MET	A	275	35.263	28.479	23.499	1.00	32.50
ATOM	2118	N	TYR	A	276	30.583	31.211	24.832	1.00	21.96
ATOM	2119	CA	TYR	A	276	30.485	32.656	25.138	1.00	23.15
ATOM	2120	C	TYR	A	276	29.256	33.365	24.546	1.00	22.39
ATOM	2121	O	TYR	A	276	28.989	34.496	24.899	1.00	22.58
ATOM	2122	CB	TYR	A	276	31.776	33.409	24.760	1.00	23.80
ATOM	2123	CG	TYR	A	276	32.904	33.136	25.729	1.00	28.82
ATOM	2124	CD1	TYR	A	276	32.940	33.756	26.951	1.00	32.73
ATOM	2125	CD2	TYR	A	276	33.935	32.246	25.415	1.00	35.83
ATOM	2126	CE1	TYR	A	276	33.956	33.507	27.864	1.00	35.96
ATOM	2127	CE2	TYR	A	276	34.975	31.992	26.336	1.00	38.59
ATOM	2128	CZ	TYR	A	276	34.958	32.628	27.562	1.00	38.60
ATOM	2129	OH	TYR	A	276	35.951	32.421	28.513	1.00	45.18
ATOM	2130	N	TRP	A	277	28.488	32.709	23.684	1.00	21.71
ATOM	2131	CA	TRP	A	277	27.281	33.350	23.149	1.00	21.24
ATOM	2132	C	TRP	A	277	26.184	33.278	24.152	1.00	20.90
ATOM	2133	O	TRP	A	277	25.914	32.217	24.708	1.00	21.96
ATOM	2134	CB	TRP	A	277	26.790	32.711	21.856	1.00	21.01
ATOM	2135	CG	TRP	A	277	27.547	33.166	20.670	1.00	19.98
ATOM	2136	CD1	TRP	A	277	28.875	33.013	20.462	1.00	17.90
ATOM	2137	CD2	TRP	A	277	27.030	33.832	19.519	1.00	19.76
ATOM	2138	NE1	TRP	A	277	29.218	33.533	19.247	1.00	18.64
ATOM	2139	CE2	TRP	A	277	28.106	34.071	18.662	1.00	18.29
ATOM	2140	CE3	TRP	A	277	25.764	34.305	19.151	1.00	20.56
ATOM	2141	CZ2	TRP	A	277	27.963	34.716	17.442	1.00	19.63
ATOM	2142	CZ3	TRP	A	277	25.624	34.950	17.943	1.00	21.16
ATOM	2143	CH2	TRP	A	277	26.720	35.137	17.095	1.00	19.92
ATOM	2144	N	TRP	A	278	25.574	34.426	24.405	1.00	20.32
ATOM	2145	CA	TRP	A	278	24.452	34.533	25.316	1.00	20.13
ATOM	2146	C	TRP	A	278	23.268	33.787	24.741	1.00	19.99

ATOM	2147	O	TRP A 278	23.083	33.758	23.538	1.00	20.42	O
ATOM	2148	CB	TRP A 278	24.025	35.999	25.441	1.00	20.65	C
ATOM	2149	CG	TRP A 278	25.031	36.864	26.107	1.00	20.56	C
ATOM	2150	CD1	TRP A 278	26.078	37.526	25.519	1.00	19.63	C
ATOM	2151	CD2	TRP A 278	25.096	37.160	27.501	1.00	19.59	C
ATOM	2152	NE1	TRP A 278	26.772	38.233	26.469	1.00	20.70	N
ATOM	2153	CE2	TRP A 278	26.191	38.012	27.699	1.00	20.10	C
ATOM	2154	CE3	TRP A 278	24.318	36.811	28.601	1.00	20.98	C
ATOM	2155	CZ2	TRP A 278	26.527	38.516	28.951	1.00	20.24	C
ATOM	2156	CZ3	TRP A 278	24.668	37.299	29.849	1.00	23.26	C
ATOM	2157	CH2	TRP A 278	25.759	38.146	30.011	1.00	20.41	C
ATOM	2158	N	HIS A 279	22.463	33.194	25.591	1.00	19.84	N
ATOM	2159	CA	HIS A 279	21.269	32.530	25.122	1.00	20.78	C
ATOM	2160	C	HIS A 279	20.202	32.495	26.192	1.00	20.37	C
ATOM	2161	O	HIS A 279	20.479	32.275	27.370	1.00	20.66	O
ATOM	2162	CB	HIS A 279	21.540	31.098	24.604	1.00	20.86	C
ATOM	2163	CG	HIS A 279	22.349	30.238	25.528	1.00	21.83	C
ATOM	2164	ND1	HIS A 279	23.720	30.324	25.608	1.00	23.19	N
ATOM	2165	CD2	HIS A 279	21.988	29.240	26.371	1.00	23.96	C
ATOM	2166	CE1	HIS A 279	24.175	29.411	26.449	1.00	22.20	C
ATOM	2167	NE2	HIS A 279	23.144	28.747	26.940	1.00	23.84	N
ATOM	2168	N	HIS A 280	18.994	32.718	25.711	1.00	20.90	N
ATOM	2169	CA	HIS A 280	17.742	32.758	26.441	1.00	21.22	C
ATOM	2170	C	HIS A 280	16.910	31.676	25.793	1.00	21.42	C
ATOM	2171	O	HIS A 280	16.749	31.685	24.580	1.00	21.70	O
ATOM	2172	CB	HIS A 280	17.099	34.124	26.224	1.00	21.04	C
ATOM	2173	CG	HIS A 280	15.632	34.168	26.489	1.00	21.54	C
ATOM	2174	ND1	HIS A 280	15.096	34.836	27.571	1.00	22.76	N
ATOM	2175	CD2	HIS A 280	14.581	33.660	25.802	1.00	22.74	C
ATOM	2176	CE1	HIS A 280	13.779	34.721	27.546	1.00	23.23	C
ATOM	2177	NE2	HIS A 280	13.441	34.014	26.482	1.00	23.05	N
ATOM	2178	N	ILE A 281	16.367	30.755	26.584	1.00	22.31	N
ATOM	2179	CA	ILE A 281	15.649	29.599	26.040	1.00	22.39	C
ATOM	2180	C	ILE A 281	14.304	29.443	26.722	1.00	22.72	C
ATOM	2181	O	ILE A 281	14.216	29.419	27.945	1.00	22.70	O
ATOM	2182	CB	ILE A 281	16.527	28.336	26.189	1.00	22.98	C
ATOM	2183	CG1	ILE A 281	17.771	28.504	25.305	1.00	24.90	C
ATOM	2184	CG2	ILE A 281	15.770	27.059	25.771	1.00	21.60	C
ATOM	2185	CD1	ILE A 281	18.795	27.556	25.554	1.00	27.31	C
ATOM	2186	N	GLU A 282	13.252	29.350	25.920	1.00	22.93	N
ATOM	2187	CA	GLU A 282	11.903	29.205	26.458	1.00	23.35	C
ATOM	2188	C	GLU A 282	11.101	28.105	25.769	1.00	22.59	C
ATOM	2189	O	GLU A 282	11.092	27.982	24.549	1.00	21.77	O
ATOM	2190	CB	GLU A 282	11.144	30.538	26.393	1.00	23.47	C
ATOM	2191	CG	GLU A 282	10.830	31.055	25.009	1.00	25.70	C
ATOM	2192	CD	GLU A 282	10.281	32.483	25.023	1.00	25.79	C
ATOM	2193	OE1	GLU A 282	10.898	33.356	25.665	1.00	27.49	O
ATOM	2194	OE2	GLU A 282	9.241	32.740	24.391	1.00	26.03	O
ATOM	2195	N	SER A 283	10.456	27.293	26.588	1.00	22.44	N
ATOM	2196	CA	SER A 283	9.570	26.246	26.103	1.00	23.00	C
ATOM	2197	C	SER A 283	8.256	26.916	25.753	1.00	23.56	C
ATOM	2198	O	SER A 283	7.685	27.615	26.584	1.00	24.14	O
ATOM	2199	CB	SER A 283	9.346	25.204	27.188	1.00	22.59	C
ATOM	2200	OG	SER A 283	10.496	24.400	27.345	1.00	22.67	O
ATOM	2201	N	LEU A 284	7.763	26.694	24.541	1.00	24.07	N
ATOM	2202	CA	LEU A 284	6.581	27.412	24.070	1.00	24.80	C
ATOM	2203	C	LEU A 284	5.386	27.324	25.004	1.00	24.51	C
ATOM	2204	O	LEU A 284	5.098	26.271	25.602	1.00	23.93	O
ATOM	2205	CB	LEU A 284	6.161	26.947	22.682	1.00	25.09	C
ATOM	2206	CG	LEU A 284	7.185	27.083	21.555	1.00	26.46	C
ATOM	2207	CD1	LEU A 284	6.475	27.236	20.215	1.00	28.29	C

ATOM	2208	CD2	LEU	A	284	8.123	28.188	21.775	1.00	26.10	C
ATOM	2209	N	LEU	A	285	4.718	28.463	25.136	1.00	24.41	N
ATOM	2210	CA	LEU	A	285	3.506	28.554	25.930	1.00	24.83	C
ATOM	2211	C	LEU	A	285	2.526	27.583	25.323	1.00	24.68	C
ATOM	2212	O	LEU	A	285	2.393	27.516	24.110	1.00	24.08	O
ATOM	2213	CB	LEU	A	285	2.927	29.961	25.872	1.00	24.79	C
ATOM	2214	CG	LEU	A	285	3.825	31.078	26.397	1.00	25.19	C
ATOM	2215	CD1	LEU	A	285	3.298	32.434	25.954	1.00	26.02	C
ATOM	2216	CD2	LEU	A	285	3.925	30.999	27.898	1.00	26.27	C
ATOM	2217	N	ASN	A	286	1.867	26.815	26.173	1.00	25.20	N
ATOM	2218	CA	ASN	A	286	0.867	25.848	25.730	1.00	25.85	C
ATOM	2219	C	ASN	A	286	1.371	24.791	24.742	1.00	25.23	C
ATOM	2220	O	ASN	A	286	0.594	24.267	23.965	1.00	24.38	O
ATOM	2221	CB	ASN	A	286	-0.319	26.599	25.124	1.00	26.54	C
ATOM	2222	CG	ASN	A	286	-0.957	27.546	26.109	1.00	29.40	C
ATOM	2223	OD1	ASN	A	286	-1.478	27.118	27.140	1.00	33.49	O
ATOM	2224	ND2	ASN	A	286	-0.893	28.843	25.821	1.00	33.58	N
ATOM	2225	N	GLY	A	287	2.669	24.487	24.774	1.00	24.55	N
ATOM	2226	CA	GLY	A	287	3.243	23.518	23.863	1.00	24.10	C
ATOM	2227	C	GLY	A	287	3.524	22.167	24.487	1.00	23.80	C
ATOM	2228	O	GLY	A	287	4.110	21.301	23.838	1.00	24.10	O
ATOM	2229	N	GLY	A	288	3.100	21.971	25.734	1.00	23.32	N
ATOM	2230	CA	GLY	A	288	3.360	20.730	26.439	1.00	23.24	C
ATOM	2231	C	GLY	A	288	4.808	20.673	26.903	1.00	23.49	C
ATOM	2232	O	GLY	A	288	5.548	21.646	26.741	1.00	22.86	O
ATOM	2233	N	ILE	A	289	5.220	19.539	27.462	1.00	23.36	N
ATOM	2234	CA	ILE	A	289	6.571	19.406	27.983	1.00	23.99	C
ATOM	2235	C	ILE	A	289	7.601	19.374	26.874	1.00	23.28	C
ATOM	2236	O	ILE	A	289	7.324	18.958	25.755	1.00	23.68	O
ATOM	2237	CB	ILE	A	289	6.750	18.123	28.817	1.00	24.68	C
ATOM	2238	CG1	ILE	A	289	6.819	16.912	27.901	1.00	26.90	C
ATOM	2239	CG2	ILE	A	289	5.648	17.983	29.885	1.00	25.75	C
ATOM	2240	CD1	ILE	A	289	7.294	15.640	28.613	1.00	29.37	C
ATOM	2241	N	THR	A	290	8.811	19.790	27.210	1.00	22.42	N
ATOM	2242	CA	THR	A	290	9.904	19.768	26.264	1.00	21.38	C
ATOM	2243	C	THR	A	290	11.030	18.880	26.774	1.00	20.56	C
ATOM	2244	O	THR	A	290	11.243	18.743	27.986	1.00	19.81	O
ATOM	2245	CB	THR	A	290	10.461	21.175	26.053	1.00	21.70	C
ATOM	2246	OG1	THR	A	290	10.823	21.761	27.308	1.00	20.15	O
ATOM	2247	CG2	THR	A	290	9.405	22.108	25.460	1.00	21.76	C
ATOM	2248	N	ILE	A	291	11.757	18.296	25.841	1.00	19.36	N
ATOM	2249	CA	ILE	A	291	12.903	17.503	26.190	1.00	19.73	C
ATOM	2250	C	ILE	A	291	14.044	17.865	25.286	1.00	19.29	C
ATOM	2251	O	ILE	A	291	13.862	17.976	24.083	1.00	19.81	O
ATOM	2252	CB	ILE	A	291	12.598	15.992	26.085	1.00	20.08	C
ATOM	2253	CG1	ILE	A	291	11.467	15.609	27.044	1.00	20.06	C
ATOM	2254	CG2	ILE	A	291	13.873	15.214	26.378	1.00	20.21	C
ATOM	2255	CD1	ILE	A	291	11.028	14.131	26.931	1.00	21.77	C
ATOM	2256	N	THR	A	292	15.215	18.070	25.882	1.00	18.95	N
ATOM	2257	CA	THR	A	292	16.406	18.407	25.156	1.00	19.17	C
ATOM	2258	C	THR	A	292	17.589	17.691	25.753	1.00	19.18	C
ATOM	2259	O	THR	A	292	17.671	17.497	26.965	1.00	19.21	O
ATOM	2260	CB	THR	A	292	16.703	19.937	25.259	1.00	19.83	C
ATOM	2261	OG1	THR	A	292	15.559	20.724	24.879	1.00	20.23	O
ATOM	2262	CG2	THR	A	292	17.787	20.350	24.270	1.00	20.15	C
ATOM	2263	N	VAL	A	293	18.530	17.314	24.903	1.00	19.25	N
ATOM	2264	CA	VAL	A	293	19.809	16.824	25.387	1.00	19.51	C
ATOM	2265	C	VAL	A	293	20.912	17.667	24.749	1.00	19.58	C
ATOM	2266	O	VAL	A	293	20.962	17.792	23.535	1.00	18.47	O
ATOM	2267	CB	VAL	A	293	20.024	15.345	25.063	1.00	19.73	C
ATOM	2268	CG1	VAL	A	293	21.490	14.951	25.250	1.00	20.24	C

ATOM	2269	CG2	VAL A 293	19.146	14.478	25.968	1.00	20.65	C
ATOM	2270	N	ASN A 294	21.766	18.277	25.569	1.00	19.85	N
ATOM	2271	CA	ASN A 294	22.882	19.057	25.039	1.00	20.26	C
ATOM	2272	C	ASN A 294	24.179	18.232	25.052	1.00	20.35	C
ATOM	2273	O	ASN A 294	24.233	17.131	25.634	1.00	21.82	O
ATOM	2274	CB	ASN A 294	23.008	20.443	25.727	1.00	20.82	C
ATOM	2275	CG	ASN A 294	23.676	20.388	27.102	1.00	21.84	C
ATOM	2276	QD1	ASN A 294	24.209	19.354	27.495	1.00	21.66	O
ATOM	2277	ND2	ASN A 294	23.630	21.519	27.849	1.00	21.23	N
ATOM	2278	N	PHE A 295	25.186	18.729	24.346	1.00	20.69	N
ATOM	2279	CA	PHE A 295	26.490	18.095	24.233	1.00	20.46	C
ATOM	2280	C	PHE A 295	27.452	19.240	24.494	1.00	21.42	C
ATOM	2281	O	PHE A 295	27.573	20.167	23.653	1.00	20.85	O
ATOM	2282	CB	PHE A 295	26.728	17.569	22.814	1.00	20.62	C
ATOM	2283	CG	PHE A 295	25.898	16.366	22.440	1.00	21.15	C
ATOM	2284	CD1	PHE A 295	24.526	16.468	22.247	1.00	21.98	C
ATOM	2285	CD2	PHE A 295	26.498	15.130	22.256	1.00	19.31	C
ATOM	2286	CE1	PHE A 295	23.791	15.343	21.902	1.00	19.77	C
ATOM	2287	CE2	PHE A 295	25.762	14.037	21.885	1.00	17.96	C
ATOM	2288	CZ	PHE A 295	24.424	14.138	21.720	1.00	17.87	C
ATOM	2289	N	TRP A 296	28.123	19.196	25.645	1.00	21.19	N
ATOM	2290	CA	TRP A 296	29.023	20.275	26.050	1.00	21.46	C
ATOM	2291	C	TRP A 296	30.481	19.834	25.873	1.00	21.42	C
ATOM	2292	O	TRP A 296	30.898	18.795	26.387	1.00	21.96	O
ATOM	2293	CB	TRP A 296	28.760	20.669	27.498	1.00	21.13	C
ATOM	2294	CG	TRP A 296	27.853	21.859	27.710	1.00	21.95	C
ATOM	2295	CD1	TRP A 296	27.797	22.987	26.955	1.00	23.23	C
ATOM	2296	CD2	TRP A 296	26.935	22.067	28.797	1.00	22.27	C
ATOM	2297	NE1	TRP A 296	26.882	23.869	27.478	1.00	22.26	N
ATOM	2298	CE2	TRP A 296	26.336	23.329	28.607	1.00	22.53	C
ATOM	2299	CE3	TRP A 296	26.531	21.298	29.894	1.00	24.83	C
ATOM	2300	CZ2	TRP A 296	25.362	23.840	29.463	1.00	22.34	C
ATOM	2301	CZ3	TRP A 296	25.557	21.810	30.754	1.00	24.59	C
ATOM	2302	CH2	TRP A 296	24.993	23.075	30.531	1.00	23.75	C
ATOM	2303	N	TYR A 297	31.235	20.632	25.126	1.00	21.64	N
ATOM	2304	CA	TYR A 297	32.633	20.361	24.845	1.00	21.81	C
ATOM	2305	C	TYR A 297	33.482	21.523	25.320	1.00	22.41	C
ATOM	2306	O	TYR A 297	33.110	22.682	25.146	1.00	21.78	O
ATOM	2307	CB	TYR A 297	32.862	20.198	23.344	1.00	21.49	C
ATOM	2308	CG	TYR A 297	32.287	18.943	22.761	1.00	21.77	C
ATOM	2309	CD1	TYR A 297	30.934	18.870	22.415	1.00	21.68	C
ATOM	2310	CD2	TYR A 297	33.083	17.841	22.526	1.00	19.80	C
ATOM	2311	CE1	TYR A 297	30.405	17.734	21.890	1.00	22.16	C
ATOM	2312	CE2	TYR A 297	32.555	16.690	21.993	1.00	20.99	C
ATOM	2313	CZ	TYR A 297	31.215	16.637	21.686	1.00	21.46	C
ATOM	2314	OH	TYR A 297	30.673	15.494	21.159	1.00	22.11	O
ATOM	2315	N	LYS A 298	34.632	21.220	25.899	1.00	23.17	N
ATOM	2316	CA	LYS A 298	35.566	22.273	26.288	1.00	24.45	C
ATOM	2317	C	LYS A 298	36.074	22.912	25.021	1.00	24.21	C
ATOM	2318	O	LYS A 298	36.264	22.228	24.025	1.00	23.35	O
ATOM	2319	CB	LYS A 298	36.748	21.699	27.085	1.00	24.85	C
ATOM	2320	CG	LYS A 298	36.436	21.416	28.552	1.00	28.00	C
ATOM	2321	CD	LYS A 298	37.657	20.865	29.298	1.00	31.59	C
ATOM	2322	CE	LYS A 298	37.309	20.447	30.730	1.00	33.77	C
ATOM	2323	NZ	LYS A 298	38.406	19.627	31.367	1.00	36.02	N
ATOM	2324	N	GLY A 299	36.317	24.216	25.056	1.00	25.28	N
ATOM	2325	CA	GLY A 299	36.818	24.909	23.886	1.00	26.38	C
ATOM	2326	C	GLY A 299	38.254	24.542	23.547	1.00	27.78	C
ATOM	2327	O	GLY A 299	38.935	23.895	24.315	1.00	27.16	O
ATOM	2328	N	ALA A 300	38.690	24.949	22.366	1.00	30.42	N
ATOM	2329	CA	ALA A 300	40.062	24.762	21.918	1.00	32.93	C

ATOM	2330	C	ALA A 300	41.021	25.544	22.819	1.00	35.12	C
ATOM	2331	O	ALA A 300	40.597	26.337	23.646	1.00	34.87	O
ATOM	2332	CB	ALA A 300	40.199	25.249	20.472	1.00	32.98	C
ATOM	2333	N	PRO A 301	42.318	25.355	22.615	1.00	38.54	N
ATOM	2334	CA	PRO A 301	43.347	26.012	23.440	1.00	40.37	C
ATOM	2335	C	PRO A·301	43.548	27.484	23.102	1.00	41.99	C
ATOM	2336	O	PRO A 301	43.379	27.853	21.950	1.00	42.88	O
ATOM	2337	CB	PRO A 301	44.615	25.246	23.061	1.00	40.42	C
ATOM	2338	CG	PRO A 301	44.397	24.879	21.638	1.00	39.87	C
ATOM	2339	CD	PRO A 301	42.919	24.544	21.535	1.00	38.98	C
ATOM	2340	N	THR A 302	43.915	28.293	24.090	1.00	44.60	N
ATOM	2341	CA	THR A 302	44.209	29.725	23.912	1.00	46.30	C
ATOM	2342	C	THR A 302	45.593	29.790	23.315	1.00	47.41	C
ATOM	2343	O	THR A 302	46.534	29.388	23.992	1.00	47.96	O
ATOM	2344	CB	THR A 302	44.242	30.391	25.294	1.00	46.57	C
ATOM	2345	OG1	THR A 302	42.941	30.320	25.895	1.00	48.00	O
ATOM	2346	CG2	THR A 302	44.526	31.869	25.199	1.00	47.24	C
ATOM	2347	N	PRO A 303	45.782	30.336	22.112	1.00	48.55	N
ATOM	2348	CA	PRO A 303	47.090	30.170	21.473	1.00	48.80	C
ATOM	2349	C	PRO A 303	48.210	30.717	22.341	1.00	48.76	C
ATOM	2350	O	PRO A 303	47.874	31.450	23.269	1.00	49.07	O
ATOM	2351	CB	PRO A 303	46.967	30.980	20.185	1.00	49.07	C
ATOM	2352	CG	PRO A 303	45.504	31.101	19.952	1.00	48.93	C
ATOM	2353	CD	PRO A 303	44.916	31.243	21.330	1.00	48.62	C
ATOM	2354	N	GLU A 307	46.795	36.776	18.436	1.00	52.62	N
ATOM	2355	CA	GLU A 307	46.885	37.814	17.415	1.00	52.76	C
ATOM	2356	C	GLU A 307	45.865	38.906	17.636	1.00	52.00	C
ATOM	2357	O	GLU A 307	44.757	38.658	18.096	1.00	52.48	O
ATOM	2358	CB	GLU A 307	46.686	37.246	15.996	1.00	53.32	C
ATOM	2359	CG	GLU A 307	46.893	38.307	14.908	1.00	54.63	C
ATOM	2360	CD	GLU A 307	46.862	37.764	13.487	1.00	56.43	C
ATOM	2361	OE1	GLU A 307	46.527	36.574	13.290	1.00	57.49	O
ATOM	2362	OE2	GLU A 307	47.173	38.543	12.558	1.00	57.89	O
ATOM	2363	N	TYR A 308	46.255	40.125	17.303	1.00	51.19	N
ATOM	2364	CA	TYR A 308	45.367	41.267	17.405	1.00	50.55	C
ATOM	2365	C	TYR A 308	44.747	41.494	16.039	1.00	49.51	C
ATOM	2366	O	TYR A 308	45.300	41.053	15.028	1.00	49.70	O
ATOM	2367	CB	TYR A 308	46.151	42.485	17.867	1.00	50.82	C
ATOM	2368	CG	TYR A 308	46.702	42.286	19.259	1.00	52.47	C
ATOM	2369	CD1	TYR A 308	45.949	42.632	20.373	1.00	53.15	C
ATOM	2370	CD2	TYR A 308	47.948	41.696	19.462	1.00	53.79	C
ATOM	2371	CE1	TYR A 308	46.426	42.426	21.643	1.00	54.22	C
ATOM	2372	CE2	TYR A 308	48.437	41.487	20.736	1.00	54.76	C
ATOM	2373	CZ	TYR A 308	47.670	41.857	21.824	1.00	55.10	C
ATOM	2374	OH	TYR A 308	48.146	41.659	23.101	1.00	56.68	O
ATOM	2375	N	PRO A 309	43.584	42.135	15.987	1.00	47.88	N
ATOM	2376	CA	PRO A 309	42.843	42.621	17.169	1.00	46.21	C
ATOM	2377	C	PRO A 309	42.139	41.503	17.952	1.00	43.75	C
ATOM	2378	O	PRO A 309·	41.768	40.503	17.369	1.00	44.10	O
ATOM	2379	CB	PRO A 309	41.804	43.566	16.562	1.00	46.39	C
ATOM	2380	CG	PRO A 309	41.610	43.069	15.128	1.00	47.65	C
ATOM	2381	CD	PRO A 309	42.899	42.431	14.716	1.00	48.06	C
ATOM	2382	N	LEU A 310	41.973	41.672	19.256	1.00	40.94	N
ATOM	2383	CA	LEU A 310	41.349	40.650	20.093	1.00	38.75	C
ATOM	2384	C	LEU A 310	39.863	40.491	19.817	1.00	36.87	C
ATOM	2385	O	LEU A 310	39.148	41.474	19.610	1.00	37.02	O
ATOM	2386	CB	LEU A 310	41.499	41.017	21.566	1.00	38.63	C
ATOM	2387	CG	LEU A 310	42.571	40.351	22.435	1.00	37.97	C
ATOM	2388	CD1	LEU A 310	43.840	40.049	21.711	1.00	37.27	C
ATOM	2389	CD2	LEU A 310	42.836	41.234	23.637	1.00	37.27	C
ATOM	2390	N	LYS A 311	39.392	39.254	19.847	1.00	34.04	N

ATOM	2391	CA	LYS	A	311	37.972	38.998	19.702	1.00	32.20	C
ATOM	2392	C	LYS	A	311	37.208	39.376	20.968	1.00	30.33	C
ATOM	2393	O	LYS	A	311	37.760	39.421	22.072	1.00	29.17	O
ATOM	2394	CB	LYS	A	311	37.733	37.564	19.371	1.00	32.59	C
ATOM	2395	N	ALA	A	312	35.924	39.641	20.788	1.00	28.23	N
ATOM	2396	CA	ALA	A	312	35.074	40.011	21.895	1.00	27.38	C
ATOM	2397	C	ALA	A	312	35.148	38.973	23.005	1.00	26.28	C
ATOM	2398	O	ALA	A	312	35.271	39.334	24.172	1.00	24.54	O
ATOM	2399	CB	ALA	A	312	33.641	40.205	21.421	1.00	27.09	C
ATOM	2400	N	HIS	A	313	35.101	37.689	22.649	1.00	25.72	N
ATOM	2401	CA	HIS	A	313	35.086	36.669	23.674	1.00	25.82	C
ATOM	2402	C	HIS	A	313	36.399	36.609	24.428	1.00	24.79	C
ATOM	2403	O	HIS	A	313	36.428	36.183	25.557	1.00	24.19	O
ATOM	2404	CB	HIS	A	313	34.688	35.293	23.129	1.00	26.92	C
ATOM	2405	CG	HIS	A	313	35.741	34.641	22.303	1.00	29.84	C
ATOM	2406	ND1	HIS	A	313	35.896	34.903	20.954	1.00	35.52	N
ATOM	2407	CD2	HIS	A	313	36.702	33.746	22.627	1.00	33.54	C
ATOM	2408	CE1	HIS	A	313	36.921	34.208	20.489	1.00	35.03	C
ATOM	2409	NE2	HIS	A	313	37.424	33.491	21.481	1.00	35.78	N
ATOM	2410	N	GLN	A	314	37.479	37.042	23.803	1.00	24.43	N
ATOM	2411	CA	GLN	A	314	38.762	37.092	24.465	1.00	24.34	C
ATOM	2412	C	GLN	A	314	38.762	38.226	25.510	1.00	24.39	C
ATOM	2413	O	GLN	A	314	39.327	38.081	26.590	1.00	24.82	O
ATOM	2414	CB	GLN	A	314	39.882	37.290	23.439	1.00	24.47	C
ATOM	2415	CG	GLN	A	314	40.032	36.106	22.472	1.00	25.49	C
ATOM	2416	CD	GLN	A	314	41.036	36.362	21.366	1.00	25.52	C
ATOM	2417	OE1	GLN	A	314	40.878	37.287	20.563	1.00	27.59	O
ATOM	2418	NE2	GLN	A	314	42.078	35.553	21.330	1.00	28.22	N
ATOM	2419	N	LYS	A	315	38.113	39.337	25.196	1.00	23.51	N
ATOM	2420	CA	LYS	A	315	38.000	40.423	26.154	1.00	23.79	C
ATOM	2421	C	LYS	A	315	37.125	39.979	27.325	1.00	23.05	C
ATOM	2422	O	LYS	A	315	37.373	40.347	28.465	1.00	21.38	O
ATOM	2423	CB	LYS	A	315	37.421	41.667	25.504	1.00	24.09	C
ATOM	2424	CG	LYS	A	315	38.382	42.286	24.533	1.00	26.96	C
ATOM	2425	CD	LYS	A	315	37.849	43.552	23.947	1.00	31.28	C
ATOM	2426	CE	LYS	A	315	38.856	44.156	22.977	1.00	34.34	C
ATOM	2427	NZ	LYS	A	315	38.207	45.098	22.005	1.00	36.25	N
ATOM	2428	N	VAL	A	316	36.109	39.177	27.041	1.00	22.30	N
ATOM	2429	CA	VAL	A	316	35.276	38.673	28.113	1.00	22.39	C
ATOM	2430	C	VAL	A	316	36.124	37.800	29.063	1.00	22.29	C
ATOM	2431	O	VAL	A	316	36.040	37.932	30.274	1.00	21.27	O
ATOM	2432	CB	VAL	A	316	34.065	37.887	27.595	1.00	22.03	C
ATOM	2433	CG1	VAL	A	316	33.309	37.282	28.750	1.00	21.64	C
ATOM	2434	CG2	VAL	A	316	33.123	38.796	26.802	1.00	22.46	C
ATOM	2435	N	ALA	A	317	36.964	36.941	28.499	1.00	22.09	N
ATOM	2436	CA	ALA	A	317	37.848	36.086	29.295	1.00	21.98	C
ATOM	2437	C	ALA	A	317	38.783	36.916	30.164	1.00	21.61	C
ATOM	2438	O	ALA	A	317	39.042	36.573	31.300	1.00	21.05	O
ATOM	2439	CB	ALA	A	317	38.668	35.147	28.380	1.00	22.01	C
ATOM	2440	N	ILE	A	318	39.273	38.016	29.606	1.00	21.45	N
ATOM	2441	CA	ILE	A	318	40.162	38.917	30.318	1.00	21.24	C
ATOM	2442	C	ILE	A	318	39.431	39.511	31.524	1.00	21.38	C
ATOM	2443	O	ILE	A	318	39.937	39.462	32.646	1.00	20.76	O
ATOM	2444	CB	ILE	A	318	40.709	40.023	29.377	1.00	20.58	C
ATOM	2445	CG1	ILE	A	318	41.715	39.434	28.400	1.00	21.19	C
ATOM	2446	CG2	ILE	A	318	41.354	41.167	30.185	1.00	20.20	C
ATOM	2447	CD1	ILE	A	318	42.223	40.419	27.353	1.00	21.35	C
ATOM	2448	N	MET	A	319	38.234	40.030	31.287	1.00	20.83	N
ATOM	2449	CA	MET	A	319	37.446	40.622	32.355	1.00	21.31	C
ATOM	2450	C	MET	A	319	37.154	39.617	33.454	1.00	21.52	C
ATOM	2451	O	MET	A	319	37.326	39.911	34.651	1.00	21.13	O

ATOM	2452	CB	MET	A	319	36.177	41.260	31.818	1.00 21.01	C
ATOM	2453	CG	MET	A	319	36.423	42.519	30.971	1.00 21.17	C
ATOM	2454	SD	MET	A	319	34.860	43.346	30.459	1.00 22.71	S
ATOM	2455	CE	MET	A	319	34.204	42.152	29.206	1.00 22.13	C
ATOM	2456	N	ARG	A	320	36.767	38.408	33.068	1.00 21.34	N
ATOM	2457	CA	ARG	A·320		36.532	37.399	34.075	1.00 21.12	C
ATOM	2458	C	ARG	A	320	37.801	37.186	34.898	1.00 21.25	C
ATOM	2459	O	ARG	A	320	37.747	37.064	36.122	1.00 21.48	O
ATOM	2460	CB	ARG	A	320	36.102	36.095	33.427	1.00 21.01	C
ATOM	2461	CG	ARG	A	320	34.723	36.145	32.741	1.00 20.63	C
ATOM	2462	CD	ARG	A	320	34.324	34.795	32.142	1.00 18.73	C
ATOM	2463	NE	ARG	A	320	34.225	33.824	33.225	1.00 19.25	N
ATOM	2464	CZ	ARG	A	320	33.247	33.809	34.115	1.00 19.86	C
ATOM	2465	NH1	ARG	A	320	32.259	34.689	34.062	1.00 21.08	N
ATOM	2466	NH2	ARG	A	320	33.263	32.923	35.081	1.00 23.29	N
ATOM	2467	N	ASN	A	321	38.947	37.123	34.231	1.00 20.94	N
ATOM	2468	CA	ASN	A	321	40.184	36.855	34.939	1.00 20.88	C
ATOM	2469	C	ASN	A	321	40.535	37.981	35.916	1.00 20.93	C
ATOM	2470	O	ASN	A	321	40.962	37.716	37.047	1.00 21.77	O
ATOM	2471	CB	ASN	A	321	41.324	36.552	33.958	1.00 21.04	C
ATOM	2472	CG	ASN	A·321		41.288	35.099	33.447	1.00 22.80	C
ATOM	2473	OD1	ASN	A	321	40.924	34.193	34.185	1.00 23.97	O
ATOM	2474	ND2	ASN	A	321	41.666	34.887	32.193	1.00 21.35	N
ATOM	2475	N	ILE	A	322	40.355	39.233	35.505	1.00 20.14	N
ATOM	2476	CA	ILE	A	322	40.633	40.336	36.408	1.00 20.06	C
ATOM	2477	C	ILE	A	322	39.742	40.196	37.650	1.00 19.42	C
ATOM	2478	O	ILE	A	322	40.207	40.345	38.767	1.00 18.73	O
ATOM	2479	CB	ILE	A	322	40.372	41.690	35.715	1.00 20.21	C
ATOM	2480	CG1	ILE	A	322	41.320	41.894	34.535	1.00 21.54	C
ATOM	2481	CG2	ILE	A	322	40.504	42.823	36.699	1.00 20.53	C
ATOM	2482	CD1	ILE	A	322	42.806	41.798	34.868	1.00 24.56	C
ATOM	2483	N	GLU	A	323	38.458	39.904	37.454	1.00 18.94	N
ATOM	2484	CA	GLU	A	323	37.553	39.757	38.576	1.00 18.98	C
ATOM	2485	C	GLU	A	323	38.027	38.651	39.492	1.00 19.33	C
ATOM	2486	O	GLU	A	323	38.084	38.832	40.707	1.00 19.05	O
ATOM	2487	CB	GLU	A	323	36.113	39.538	38.106	1.00 19.25	C
ATOM	2488	CG	GLU	A	323	35.518	40.803	37.484	1.00 19.34	C
ATOM	2489	CD	GLU	A	323	34.143	40.616	36.855	1.00 18.71	C
ATOM	2490	OE1	GLU	A	323	33.183	40.332	37.573	1.00 19.19	O
ATOM	2491	OE2	GLU	A	323	34.024	40.805	35.636	1.00 19.56	O
ATOM	2492	N	LYS	A	324	38.425	37.528	38.908	1.00 19.55	N
ATOM	2493	CA	LYS	A	324	38.874	36.379	39.693	1.00 20.24	C
ATOM	2494	C	LYS	A	324	40.115	36.707	40.513	1.00 20.68	C
ATOM	2495	O	LYS	A	324	40.157	36.405	41.699	1.00 20.83	O
ATOM	2496	CB	LYS	A	324	39.175	35.175	38.789	1.00 20.07	C
ATOM	2497	CG	LYS	A	324	37.924	34.507	38.212	1.00 20.57	C
ATOM	2498	CD	LYS	A	324	38.331	33.318	37.350	1.00 20.28	C
ATOM	2499	CE	LYS	A	324	37.137	32.689	36.621	1.00 19.29	C
ATOM	2500	NZ	LYS	A	324	37.596	31.460	35.876	1.00 17.17	N
ATOM	2501	N	MET	A	325	41.112	37.320	39.885	1.00 21.21	N
ATOM	2502	CA	MET	A	325	42.366	37.657	40.568	1.00 22.87	C
ATOM	2503	C	MET	A	325	42.162	38.665	41.699	1.00 22.44	C
ATOM	2504	O·	MET	A	325	42.763	38.560	42.771	1.00 22.08	O
ATOM	2505	CB	MET	A	325	43.380	38.232	39.572	1.00 23.32	C
ATOM	2506	CG	MET	A	325	43.993	37.195	38.671	1.00 27.47	C
ATOM	2507	SD	MET	A	325	44.795	37.924	37.197	1.00 35.56	S
ATOM	2508	CE	MET	A	325	45.664	39.189	38.009	1.00 34.71	C
ATOM	2509	N	LEU	A	326	41.309	39.641	41.452	1.00 22.71	N
ATOM	2510	CA	LEU	A	326	41.043	40.670	42.449	1.00 23.24	C
ATOM	2511	C	LEU	A	326	40.385	40.073	43.679	1.00 23.15	C
ATOM	2512	O	LEU	A	326	40.735	40.417	44.795	1.00 22.40	O

ATOM	2513	CB	LEU A 326	40.151	41.735	41.865	1.00	23.01	C
ATOM	2514	CG	LEU A 326	40.677	43.139	41.625	1.00	25.86	C
ATOM	2515	CD1	LEU A 326	42.187	43.277	41.529	1.00	26.53	C
ATOM	2516	CD2	LEU A 326	39.986	43.672	40.377	1.00	25.54	C
ATOM	2517	N	GLY A 327	39.441	39.164	43.460	1.00	23.29	N
ATOM	2518	CA	GLY A 327	38.760	38.489	44.547	1.00	23.97	C
ATOM	2519	C	GLY A 327	39.728	37.723	45.418	1.00	24.63	C
ATOM	2520	O	GLY A 327	39.659	37.783	46.649	1.00	24.75	O
ATOM	2521	N	GLU A 328	40.644	37.002	44.778	1.00	25.03	N
ATOM	2522	CA	GLU A 328	41.671	36.265	45.506	1.00	26.08	C
ATOM	2523	C	GLU A 328	42.661	37.180	46.223	1.00	25.43	C
ATOM	2524	O	GLU A 328	43.029	36.926	47.367	1.00	25.16	O
ATOM	2525	CB	GLU A 328	42.442	35.368	44.546	1.00	26.76	C
ATOM	2526	CG	GLU A 328	41.576	34.278	43.947	1.00	30.36	C
ATOM	2527	CD	GLU A 328	41.719	32.957	44.676	1.00	35.76	C
ATOM	2528	OE1	GLU A 328	42.091	32.986	45.878	1.00	38.79	O
ATOM	2529	OE2	GLU A 328	41.483	31.896	44.034	1.00	38.82	O
ATOM	2530	N	ALA A 329	43.094	38.240	45.552	1.00	24.91	N
ATOM	2531	CA	ALA A 329	44.102	39.119	46.134	1.00	24.95	C
ATOM	2532	C	ALA A 329	43.535	39.929	47.285	1.00	24.94	C
ATOM	2533	O	ALA A 329	44.197	40.147	48.276	1.00	24.57	O
ATOM	2534	CB	ALA A 329	44.682	40.022	45.088	1.00	24.88	C
ATOM	2535	N	LEU A 330	42.290	40.354	47.161	1.00	25.47	N
ATOM	2536	CA	LEU A 330	41.672	41.133	48.219	1.00	26.16	C
ATOM	2537	C	LEU A 330	41.212	40.265	49.379	1.00	26.80	C
ATOM	2538	O	LEU A 330	40.994	40.761	50.471	1.00	27.00	O
ATOM	2539	CB	LEU A 330	40.504	41.930	47.669	1.00	26.08	C
ATOM	2540	CG	LEU A 330	40.954	42.981	46.653	1.00	26.04	C
ATOM	2541	CD1	LEU A 330	39.760	43.489	45.888	1.00	26.16	C
ATOM	2542	CD2	LEU A 330	41.688	44.134	47.353	1.00	26.65	C
ATOM	2543	N	GLY A 331	41.037	38.977	49.126	1.00	27.87	N
ATOM	2544	CA	GLY A 331	40.645	38.039	50.158	1.00	28.89	C
ATOM	2545	C	GLY A 331	39.176	38.086	50.526	1.00	29.43	C
ATOM	2546	O	GLY A 331	38.763	37.435	51.478	1.00	30.62	O
ATOM	2547	N	ASN A 332	38.400	38.887	49.808	1.00	29.59	N
ATOM	2548	CA	ASN A 332	36.963	38.995	50.023	1.00	29.64	C
ATOM	2549	C	ASN A 332	36.367	39.500	48.718	1.00	29.00	C
ATOM	2550	O	ASN A 332	36.649	40.605	48.303	1.00	28.70	O
ATOM	2551	CB	ASN A 332	36.656	39.973	51.156	1.00	30.15	C
ATOM	2552	CG	ASN A 332	35.162	40.094	51.441	1.00	31.82	C
ATOM	2553	OD1	ASN A 332	34.335	39.531	50.734	1.00	34.71	O
ATOM	2554	ND2	ASN A 332	34.818	40.818	52.504	1.00	35.11	N
ATOM	2555	N	PRO A 333	35.528	38.706	48.081	1.00	28.53	N
ATOM	2556	CA	PRO A 333	35.001	39.075	46.771	1.00	28.25	C
ATOM	2557	C	PRO A 333	34.176	40.343	46.807	1.00	27.91	C
ATOM	2558	O	PRO A 333	34.033	40.984	45.776	1.00	26.99	O
ATOM	2559	CB	PRO A 333	34.120	37.893	46.368	1.00	28.16	C
ATOM	2560	CG	PRO A 333	34.137	36.938	47.468	1.00	28.91	C
ATOM	2561	CD	PRO A 333	35.022	37.415	48.561	1.00	28.96	C
ATOM	2562	N	GLN A 334	33.638	40.701	47.965	1.00	27.80	N
ATOM	2563	CA	GLN A 334	32.814	41.896	48.039	1.00	27.97	C
ATOM	2564	C	GLN A 334	33.665	43.155	47.975	1.00	26.77	C
ATOM	2565	O	GLN A 334	33.144	44.245	47.764	1.00	26.51	O
ATOM	2566	CB	GLN A 334	31.906	41.867	49.278	1.00	28.98	C
ATOM	2567	CG	GLN A 334	30.675	40.969	49.038	1.00	32.17	C
ATOM	2568	CD	GLN A 334	29.661	40.962	50.175	1.00	35.54	C
ATOM	2569	OE1	GLN A 334	29.682	41.840	51.048	1.00	37.92	O
ATOM	2570	NE2	GLN A 334	28.760	39.961	50.163	1.00	36.72	N
ATOM	2571	N	GLU A 335	34.974	43.007	48.132	1.00	25.19	N
ATOM	2572	CA	GLU A 335	35.860	44.151	48.018	1.00	24.41	C
ATOM	2573	C	GLU A 335	36.170	44.466	46.537	1.00	22.68	C

ATOM	2574	O	GLU	A	335	36.700	45.521	46.228	1.00	21.42	O
ATOM	2575	CB	GLU	A	335	37.150	43.928	48.835	1.00	24.98	C
ATOM	2576	CG	GLU	A	335	36.974	44.148	50.343	1.00	27.94	C
ATOM	2577	CD	GLU	A	335	38.264	44.055	51.139	1.00	31.85	C
ATOM	2578	OE1	GLU	A	335	39.248	44.736	50.777	1.00	34.79	O
ATOM	2579	OE2	GLU	A·335		38.298	43.312	52.158	1.00	36.87	O
ATOM	2580	N	VAL	A	336	35.809	43.566	45.625	1.00	21.32	N
ATOM	2581	CA	VAL	A	336	36.113	43.751	44.201	1.00	20.37	C
ATOM	2582	C	VAL	A	336	35.541	45.034	43.603	1.00	20.01	C
ATOM	2583	O	VAL	A	336	36.247	45.798	42.954	·1.00	19.07	O
ATOM	2584	CB	VAL	A	336	35.647	42.554	43.371	1.00	20.60	C
ATOM	2585	CG1	VAL	A	336	35.785	42.841	41.883	1.00	21.06	C
ATOM	2586	CG2	VAL	A	336	36.463	41.316	43.743	1.00	20.68	C
ATOM	2587	N	GLY	A	337	34.260	45.275	43.842	1.00	19.61	N
ATOM	2588	CA	GLY	A	337	33.593	46.437	43.317	1.00	19.45	C
ATOM	2589	C	GLY	A	337	34.205	47.760	43.731	1.00	19.51	C
ATOM	2590	O	GLY	A	337	34.522	48.576	42.871	1.00	18.93	O
ATOM	2591	N	PRO	A	338	34.333	48.010	45.032·	1.00	20.41	N
ATOM	2592	CA	PRO	A	338	34.959	49.253	45.503	1.00	20.40	C
ATOM	2593	C	PRO	A	338	36.368	49.500	44.923	1.00	20.13	C
ATOM	2594	O	PRO	A	338	36.674	50.630	44.548	1.00	19.20	O
ATOM	2595	CB	PRO	A	338	·.34.960	49.092	47.035	1.00	20.63	C
ATOM	2596	CG	PRO	A	338	.33.749	48.261	47.298	1.00	21.17	C
ATOM	2597	CD	PRO	A	338	33.782	47.221	46.151	1.00	20.95	C
ATOM	2598	N	LEU	A	339	37.199	48.470	44.831	1.00	20.34	N
ATOM	2599	CA	LEU	A	339	38.518	48.655	44.234	1.00	20.55	C
ATOM	2600	C	LEU	A	339	38.382	49.060	42.768	1.00	20.06	C
ATOM	2601	O	LEU	A	339	39.020	50.019	42.330	1.00	19.61	O
ATOM	2602	CB	LEU	A	339	39.383	47.408	44.358	1.00	20.81	C
ATOM	2603	CG	LEU	A	339	40.855	47.618	43.943	1.00	22.54	C
ATOM	2604	CD1	LEU	A	339	41.809	46.817	44.786	1.00	25.30	C
ATOM	2605	CD2	LEU	A	339	41.035	47.209	42.496	1.00	23.17	C
ATOM	2606	N	LEU	A	340	37.526	48.361	42.023	1.00	19.51	N
ATOM	2607	CA	LEU	A	340	37.327	48.687	40.600	·1.00	19.36	C
ATOM	2608	C	LEU	A	340	36.827	50.120	·40.427	1.00	19.30	C
ATOM	2609	O	LEU	A	340	37.318	50.861	39.566	1.00	17.55	O
ATOM	2610	CB	LEU	A	340	36.361 ·	47.721	39.952	1.00	19.31	C
ATOM	2611	CG	LEU	A	340	36.929	46.333	39.637	1.00	21.99	C
ATOM	2612	CD1	LEU	A	340	35.842	45.506	39.069	·1.00	22.03	C
ATOM	2613	CD2	LEU	A	340	38.140	46.390	38.673	1.00	21.20	C
ATOM	2614	N	ASN	A	341	35.879	50.521	41.270	1.00	19.17	N
ATOM	2615	CA	ASN	A	341	35.369	51.887	41.232	1.00	20.20	C
ATOM	2616	C	ASN	A	341	36.465	52.914·	41.530	1.00	19.98	C
ATOM	2617	O	ASN	A	341	36.598	53.920	40.848	1.00	19.61	O
ATOM	2618	CB	ASN	A	341	34.181	52.043	42.196	1.00	20.66	C
ATOM	2619	CG	ASN	A	341	32.898	51.459	41.619	1.00	24.17	C
ATOM	2620	OD1	ASN	A	341	32.484	51.843	40.531	1.00	30.93	O
ATOM	2621	ND2	ASN	A	341	32.294	50.499	42.317	1.00	26.37	N
ATOM	2622	N	THR	A	342	37.245	52.·633	42.558	1.00	20.07	N
ATOM	2623	CA	THR	A	342	38.351	53.489	42.939	1.00	20.49	C
ATOM	2624	C	THR	A	342	39.322	53.613	41.763	1.00	20.27	C
ATOM	2625	O	THR	A	342	39.835	54.688	41.502	1.00	19.66	O
ATOM	2626	CB	THR	A	342	39.001	52.909	44.189	1.00	20.82	C
ATOM	2627	OG1	THR	A	342	38.123	53.124	45.320	1.00	22.13	O
ATOM	2628	CG2	THR	A	342	40.308	53.625	44.545	1.00	21.01	C
ATOM	2629	N	MET	A	343	39.517	52.525	41.024	1.00	20.30	N
ATOM	2630	CA	MET	A	343	40.402	52.543	39.873	1.00	20.66	C
ATOM	2631	C	MET	A	343	39.932	53.445	38.758	1.00	20.29	C
ATOM	2632	O	MET	A	343	40.750	54.119	38.129	1.00	19.31	O
ATOM	2633	CB	MET	A	343	40.560	51.157	39.270	1.00	20.76	C
ATOM	2634	CG	MET	A	343	41.810	50.453	39.625	1.00	23.39	C

ATOM	2635	SD	MET A 343	42.247	49.059	38.524	1.00	25.69	S
ATOM	2636	CE	MET A 343	41.161	48.058	38.968	1.00	26.74	C
ATOM	2637	N	ILE A 344	38.631	53.438	38.466	1.00	20.76	N
ATOM	2638	CA	ILE A 344	38.167	54.187	37.312	1.00	21.23	C
ATOM	2639	C	ILE A 344	37.648	55.577	37.565	1.00	20.71	C
ATOM	2640	O	ILE A 344	37.763	56.403	36.666	1.00	20.65	O
ATOM	2641	CB	ILE A 344	37.109	53.400	36.458	1.00	22.07	C
ATOM	2642	CG1	ILE A 344	35.710	53.613	36.992	1.00	23.91	C
ATOM	2643	CG2	ILE A 344	37.482	51.943	36.352	1.00	24.35	C
ATOM	2644	CD1	ILE A 344	34.650	53.199	36.033	1.00	28.26	C
ATOM	2645	N	LYS A 345	37.069	55.886	38.726	1.00	20.84	N
ATOM	2646	CA	LYS A 345	36.482	57.231	38.817	1.00	21.15	C
ATOM	2647	C	LYS A 345	37.464	58.376	38.784	1.00	19.86	C
ATOM	2648	O	LYS A 345	38.459	58.429	39.517	1.00	19.23	O
ATOM	2649	CB	LYS A 345	35.438	57.451	39.922	1.00	22.66	C
ATOM	2650	CG	LYS A 345	35.562	56.714	41.190	1.00	27.82	C
ATOM	2651	CD	LYS A 345	34.214	56.021	41.489	1.00	30.51	C
ATOM	2652	CE	LYS A 345	33.398	56.782	42.502	1.00	32.51	C
ATOM	2653	NZ	LYS A 345	34.069	56.806	43.829	1.00	37.63	N
ATOM	2654	N	GLY A 346	37.143	59.307	37.899	1.00	18.18	N
ATOM	2655	CA	GLY A 346	37.978	60.453	37.644	1.00	17.22	C
ATOM	2656	C	GLY A 346	39.303	60.105	36.978	1.00	16.31	C
ATOM	2657	O	GLY A 346	40.172	60.949	36.889	1.00	16.63	O
ATOM	2658	N	ARG A 347	39.453	58.872	36.531	1.00	16.85	N
ATOM	2659	CA	ARG A 347	40.697	58.413	35.904	1.00	17.52	C
ATOM	2660	C	ARG A 347	40.469	57.811	34.502	1.00	17.57	C
ATOM	2661	O	ARG A 347	41.178	58.143	33.559	1.00	17.10	O
ATOM	2662	CB	ARG A 347	41.379	57.384	36.812	1.00	17.20	C
ATOM	2663	CG	ARG A 347	41.822	57.949	38.181	1.00	16.77	C
ATOM	2664	CD	ARG A 347	43.287	57.491	38.583	1.00	18.88	C
ATOM	2665	NE	ARG A 347	43.254	56.087	38.618	1.00	17.77	N
ATOM	2666	CZ	ARG A 347	44.115	55.220	38.149	1.00	16.11	C
ATOM	2667	NH1	ARG A 347	45.323	55.512	37.658	1.00	16.59	N
ATOM	2668	NH2	ARG A 347	43.734	53.978	38.276	1.00	13.22	N
ATOM	2669	N	TYR A 348	39.472	56.954	34.375	1.00	18.74	N
ATOM	2670	CA	TYR A 348	39.138	56.317	33.091	1.00	20.48	C
ATOM	2671	C	TYR A 348	37.674	56.499	32.671	1.00	21.75	C
ATOM	2672	O	TYR A 348	37.296	56.047	31.596	1.00	22.39	O
ATOM	2673	CB	TYR A 348	39.411	54.800	33.124	1.00	19.97	C
ATOM	2674	CG	TYR A 348	40.874	54.384	33.199	1.00	19.65	C
ATOM	2675	CD1	TYR A 348	41.661	54.310	32.054	1.00	18.48	C
ATOM	2676	CD2	TYR A 348	41.458	54.051	34.414	1.00	17.73	C
ATOM	2677	CE1	TYR A 348	42.986	53.921	32.122	1.00	19.00	C
ATOM	2678	CE2	TYR A 348	42.775	53.667	34.494	1.00	18.72	C
ATOM	2679	CZ	TYR A 348	43.543	53.600	33.339	1.00	18.96	C
ATOM	2680	OH	TYR A 348	44.856	53.203	33.419	1.00	17.77	O
ATOM	2681	N	ASN A 349	36.837	57.123	33.488	1.00	23.99	N
ATOM	2682	CA	ASN A 349	35.429	57.244	33.089	1.00	26.57	C
ATOM	2683	C	ASN A 349	34.947	58.611	32.689	1.00	27.62	C
ATOM	2684	O	ASN A 349	35.646	59.606	32.655	1.00	28.49	O
ATOM	2685	CB	ASN A 349	34.496	56.720	34.150	1.00	26.11	C
ATOM	2686	CG	ASN A 349	34.511	57.552	35.386	1.00	28.01	C
ATOM	2687	OD1	ASN A 349	35.282	58.518	35.517	1.00	29.49	O
ATOM	2688	ND2	ASN A 349	33.658	57.173	36.342	1.00	31.84	N
ATOM	2689	OXT	ASN A 349	33.761	58.686	32.399	1.00	31.04	O
TER	2690		ASN A 349						
ATOM	2691	N	LEU S 795	45.837	35.555	30.600	1.00	35.49	N
ATOM	2692	CA	LEU S 795	44.757	36.539	30.946	1.00	35.77	C
ATOM	2693	C	LEU S 795	43.580	36.250	30.030	1.00	35.54	C
ATOM	2694	O	LEU S 795	42.418	36.338	30.412	1.00	34.79	O
ATOM	2695	CB	LEU S 795	45.257	37.967	30.787	1.00	36.01	C

ATOM	2696	CG	LEU	S	795	44.695	38.978	31.791	1.00	37.16	C
ATOM	2697	CD1	LEU	S	795	44.761	38.459	33.204	1.00	37.65	C
ATOM	2698	CD2	LEU	S	795	45.450	40.289	31.718	1.00	38.07	C
ATOM	2699	N	THR	S	796	43.936	35.940	28.796	1.00	35.47	N
ATOM	2700	CA	THR	S	796	43.060	35.351	27.800	1.00	36.25	C
ATOM	2701	C	THR	S	796	42.644	33.888	28.079	1.00	35.84	C
ATOM	2702	O	THR	S	796	41.819	33.331	27.365	1.00	36.38	O
ATOM	2703	CB	THR	S	796	43.817	35.429	26.457	1.00	36.63	C
ATOM	2704	OG1	THR	S	796	43.251	34.528	25.524	1.00	38.48	O
ATOM	2705	CG2	THR	S	796	45.257	34.907	26.593	1.00	37.07	C
ATOM	2706	N	SER	S	797	43.197	33.251	29.101	1.00	35.44	N
ATOM	2707	CA	SER	S	797	42.835	31.860	29.377	1.00	35.29	C
ATOM	2708	C	SER	S	797	41.426	31.760	29.984	1.00	35.18	C
ATOM	2709	O	SER	S	797	40.925	32.701	30.611	1.00	33.96	O
ATOM	2710	CB	SER	S	797	43.856	31.189	30.291	1.00	35.17	C
ATOM	2711	OG	SER	S	797	43.716	31.654	31.624	1.00	36.65	O
ATOM	2712	N	TYR	S	798	40.789	30.611	29.790	1.00	35.36	N
ATOM	2713	CA	TYR	S	798	39.427	30.430	30.256	1.00	35.94	C
ATOM	2714	C	TYR	S	798	39.148	29.075	30.890	1.00	35.14	C
ATOM	2715	O	TYR	S	798	39.845	28.095	30.657	1.00	35.54	O
ATOM	2716	CB	TYR	S	798	38.440	30.707	29.120	1.00	36.37	C
ATOM	2717	CG	TYR	S	798	38.554	29.794	27.920	1.00	39.89	C
ATOM	2718	CD1	TYR	S	798	39.587	29.934	26.996	1.00	42.41	C
ATOM	2719	CD2	TYR	S	798	37.606	28.808	27.697	1.00	43.13	C
ATOM	2720	CE1	TYR	S	798	39.681	29.095	25.893	1.00	43.97	C
ATOM	2721	CE2	TYR	S	798	37.687	27.963	26.597	1.00	44.94	C
ATOM	2722	CZ	TYR	S	798	38.723	28.109	25.698	1.00	44.95	C
ATOM	2723	OH	TYR	S	798	38.781	27.270	24.613	1.00	44.37	O
ATOM	2724	N	ASP	S	799	38.108	29.046	31.709	1.00	34.54	N
ATOM	2725	CA	ASP	S	799	37.685	27.840	32.392	1.00	33.87	C
ATOM	2726	C	ASP	S	799	36.600	27.187	31.545	1.00	32.58	C
ATOM	2727	O	ASP	S	799	36.465	27.501	30.366	1.00	32.32	O
ATOM	2728	CB	ASP	S	799	37.140	28.208	33.770	1.00	34.50	C
ATOM	2729	CG	ASP	S	799	37.299	27.104	34.773	1.00	36.07	C
ATOM	2730	OD1	ASP	S	799	36.790	25.986	34.551	1.00	37.15	O
ATOM	2731	OD2	ASP	S	799	37.918	27.279	35.833	1.00	41.54	O
ATOM	2732	N	CYS	S	800	35.812	26.301	32.141	1.00	30.83	N
ATOM	2733	CA	CYS	S	800	34.798	25.586	31.392	1.00	29.83	C
ATOM	2734	C	CYS	S	800	33.490	25.511	32.161	1.00	29.15	C
ATOM	2735	O	CYS	S	800	32.794	24.502	32.092	1.00	28.68	O
ATOM	2736	CB	CYS	S	800	35.273	24.167	31.092	1.00	29.46	C
ATOM	2737	SG	CYS	S	800	35.576	23.194	32.601	1.00	30.36	S
ATOM	2738	N	GLU	S	801	33.152	26.578	32.874	1.00	28.36	N
ATOM	2739	CA	GLU	S	801	31.936	26.605	33.670	1.00	28.63	C
ATOM	2740	C	GLU	S	801	30.667	26.793	32.829	1.00	28.34	C
ATOM	2741	O	GLU	S	801	30.626	27.562	31.867	1.00	27.30	O
ATOM	2742	CB	GLU	S	801	32.038	27.688	34.751	1.00	28.61	C
ATOM	2743	CG	GLU	S	801	33.252	27.501	35.655	1.00	30.83	C
ATOM	2744	CD	GLU	S	801	33.188	28.346	36.907	1.00	32.58	C
ATOM	2745	OE1	GLU	S	801	32.414	27.985	37.805	1.00	33.57	O
ATOM	2746	OE2	GLU	S	801	33.910	29.362	36.989	1.00	33.97	O
ATOM	2747	N	VAL	S	802	29.627	26.062	33.212	1.00	28.85	N
ATOM	2748	CA	VAL	S	802	28.350	26.079	32.515	1.00	29.03	C
ATOM	2749	C	VAL	S	802	27.233	26.056	33.546	1.00	29.80	C
ATOM	2750	O	VAL	S	802	27.505	25.948	34.726	1.00	29.92	O
ATOM	2751	CB	VAL	S	802	28.221	24.834	31.606	1.00	28.44	C
ATOM	2752	CG1	VAL	S	802	29.288	24.856	30.523	1.00	26.99	C
ATOM	2753	CG2	VAL	S	802	28.333	23.551	32.428	1.00	29.08	C
ATOM	2754	N	ASN	S	803	25.978	26.135	33.111	1.00	31.09	N
ATOM	2755	CA	ASN	S	803	24.853	26.053	34.042	1.00	32.53	C
ATOM	2756	C	ASN	S	803	24.550	24.641	34.497	1.00	33.81	C

ATOM	2757	O	ASN	S	803	23.456	24.143	34.270	1.00	34.27	O
ATOM	2758	CB	ASN	S	803	23.575	26.659	33.463	1.00	32.29	C
ATOM	2759	CG	ASN	S	803	23.640	28.146	33.367	1.00	31.77	C
ATOM	2760	OD1	ASN	S	803	24.688	28.741	33.616	1.00	33.47	O
ATOM	2761	ND2	ASN	S	803	22.525	28.772	33.005	1.00	29.83	N
ATOM	2762	N	ALA	S	804	25.521	24.015	35.147	1.00	35.23	N
ATOM	2763	CA	ALA	S	804	25.365	22.689	35.740	1.00	36.86	C
ATOM	2764	C	ALA	S	804	26.577	22.452	36.638	1.00	37.98	C
ATOM	2765	O	ALA	S	804	27.660	22.949	36.360	1.00	37.44	O
ATOM	2766	CB	ALA	S	804	25.285	21.610	34.676	1.00	36.63	C
ATOM	2767	N	PRO	S	805	26.394	21.694	37.711	1.00	40.20	N
ATOM	2768	CA	PRO	S	805	27.495	21.381	38.635	1.00	41.46	C
ATOM	2769	C	PRO	S	805	28.572	20.511	37.983	1.00	42.51	C
ATOM	2770	O	PRO	S	805	28.342	19.931	36.938	1.00	43.07	O
ATOM	2771	CB	PRO	S	805	26.799	20.615	39.774	1.00	41.54	C
ATOM	2772	CG	PRO	S	805	25.506	20.116	39.185	1.00	41.29	C
ATOM	2773	CD	PRO	S	805	25.117	21.076	38.115	1.00	40.40	C
ATOM	2774	N	ILE	S	806	29.728	20.406	38.622	1.00	44.25	N
ATOM	2775	CA	ILE	S	806	30.854	19.627	38.099	1.00	44.96	C
ATOM	2776	C	ILE	S	806	30.770	18.169	38.532	1.00	45.18	C
ATOM	2777	O	ILE	S	806	29.902	17.801	39.323	1.00	45.78	O
ATOM	2778	CB	ILE	S	806	32.197	20.246	38.569	1.00	45.19	C
ATOM	2779	CG1	ILE	S	806	32.412	20.018	40.070	1.00	46.10	C
ATOM	2780	CG2	ILE	S	806	32.230	21.743	38.246	1.00	46.08	C
ATOM	2781	CD1	ILE	S	806	33.740	20.574	40.597	1.00	46.98	C
ATOM	2782	N	LEU	S	812	29.934	8.629	39.561	1.00	43.80	N
ATOM	2783	CA	LEU	S	812	29.027	8.736	38.425	1.00	43.90	C
ATOM	2784	C	LEU	S	812	29.761	9.243	37.182	1.00	43.45	C
ATOM	2785	O	LEU	S	812	30.160	10.410	37.114	1.00	43.36	O
ATOM	2786	CB	LEU	S	812	27.862	9.678	38.757	1.00	44.22	C
ATOM	2787	CG	LEU	S	812	26.979	9.292	39.951	1.00	45.50	C
ATOM	2788	CD1	LEU	S	812	25.871	10.341	40.144	1.00	46.20	C
ATOM	2789	CD2	LEU	S	812	26.385	7.894	39.793	1.00	45.08	C
ATOM	2790	N	LEU	S	813	29.928	8.375	36.190	1.00	42.70	N
ATOM	2791	CA	LEU	S	813	30.620	8.776	34.969	1.00	42.21	C
ATOM	2792	C	LEU	S	813	29.711	9.604	34.057	1.00	41.46	C
ATOM	2793	O	LEU	S	813	28.492	9.438	34.062	1.00	41.23	O
ATOM	2794	CB	LEU	S	813	31.167	7.554	34.225	1.00	42.30	C
ATOM	2795	CG	LEU	S	813	32.093	6.644	35.046	1.00	42.35	C
ATOM	2796	CD1	LEU	S	813	32.494	5.419	34.233	1.00	42.48	C
ATOM	2797	CD2	LEU	S	813	33.322	7.398	35.527	1.00	41.80	C
ATOM	2798	N	GLN	S	814	30.326	10.492	33.283	1.00	40.74	N
ATOM	2799	CA	GLN	S	814	29.603	11.385	32.378	1.00	40.26	C
ATOM	2800	C	GLN	S	814	30.475	11.775	31.190	1.00	39.82	C
ATOM	2801	O	GLN	S	814	31.674	11.514	31.176	1.00	39.19	O
ATOM	2802	CB	GLN	S	814	29.173	12.649	33.122	1.00	40.24	C
ATOM	2803	CG	GLN	S	814	30.336	13.501	33.615	1.00	40.51	C
ATOM	2804	CD	GLN	S	814	29.879	14.725	34.406	1.00	41.88	C
ATOM	2805	OE1	GLN	S	814	29.200	14.590	35.419	1.00	41.86	O
ATOM	2806	NE2	GLN	S	814	30.253	15.919	33.940	1.00	40.63	N
ATOM	2807	N	GLY	S	815	29.864	12.416	30.200	1.00	39.81	N
ATOM	2808	CA	GLY	S	815	30.568	12.851	29.012	1.00	39.53	C
ATOM	2809	C	GLY	S	815	31.402	11.755	28.365	1.00	39.85	C
ATOM	2810	O	GLY	S	815	30.962	10.609	28.210	1.00	38.55	O
ATOM	2811	N	GLU	S	816	32.624	12.123	27.995	1.00	40.44	N
ATOM	2812	CA	GLU	S	816	33.553	11.208	27.352	1.00	41.24	C
ATOM	2813	C	GLU	S	816	33.744	9.926	28.154	1.00	41.73	C
ATOM	2814	O	GLU	S	816	33.895	8.852	27.577	1.00	41.11	O
ATOM	2815	CB	GLU	S	816	34.909	11.884	27.148	1.00	41.24	C
ATOM	2816	CG	GLU	S	816	35.752	11.238	26.063	1.00	42.19	C
ATOM	2817	CD	GLU	S	816	37.161	11.790	26.019	1.00	43.70	C

ATOM	2818	OE1	GLU	S	816	37.985	11.311	26.814	1.00	45.25	O
ATOM	2819	OE2	GLU	S	816	37.447	12.696	25.201	1.00	44.50	O
ATOM	2820	N	GLU	S	817	33.724	10.039	29.479	1.00	42.66	N
ATOM	2821	CA	GLU	S	817	33.925	8.877	30.340	1.00	43.73	C
ATOM	2822	C	GLU	S	817	32.744	7.917	30.268	1.00	44.19	C
ATOM	2823	O	GLU	S	817	32.930	6.699	30.252	1.00	43.99	O
ATOM	2824	CB	GLU	S	817	34.167	9.308	31.788	1.00	43.81	C
ATOM	2825	CG	GLU	S	817	35.463	10.077	31.989	1.00	44.98	C
ATOM	2826	CD	GLU	S	817	35.337	11.569	31.688	1.00	46.95	C
ATOM	2827	OE1	GLU	S	817	34.221	12.052	31.394	1.00	48.87	O
ATOM	2828	OE2	GLU	S	817	36.362	12.277	31.748	1.00	49.02	O
ATOM	2829	N	LEU	S	818	31.536	8.470	30.231	1.00	44.93	N
ATOM	2830	CA	LEU	S	818	30.335	7.663	30.149	1.00	45.78	C
ATOM	2831	C	LEU	S	818	30.359	6.882	28.846	1.00	46.89	C
ATOM	2832	O	LEU	S	818	30.163	5.663	28.833	1.00	46.50	O
ATOM	2833	CB	LEU	S	818	29.077	8.537	30.219	1.00	45.65	C
ATOM	2834	CG	LEU	S	818	27.741	7.788	30.147	1.00	45.58	C
ATOM	2835	CD1	LEU	S	818	27.612	6.809	31.318	1.00	45.36	C
ATOM	2836	CD2	LEU	S	818	26.551	8.719	30.133	1.00	43.95	C
ATOM	2837	N	LEU	S	819	30.654	7.588	27.760	1.00	48.01	N
ATOM	2838	CA	LEU	S	819	30.607	7.014	26.420	1.00	49.24	C
ATOM	2839	C	LEU	S	819	31.559	5.829	26.247	1.00	50.32	C
ATOM	2840	O	LEU	S	819	31.169	4.777	25.731	1.00	50.11	O
ATOM	2841	CB	LEU	S	819	30.903	8.105	25.380	1.00	49.22	C
ATOM	2842	CG	LEU	S	819	30.848	7.724	23.901	1.00	49.32	C
ATOM	2843	CD1	LEU	S	819	29.495	7.178	23.497	1.00	48.73	C
ATOM	2844	CD2	LEU	S	819	31.205	8.940	23.058	1.00	49.85	C
ATOM	2845	N	ARG	S	820	32.801	6.005	26.684	1.00	51.33	N
ATOM	2846	CA	ARG	S	820	33.807	4.966	26.550	1.00	52.53	C
ATOM	2847	C	ARG	S	820	33.471	3.748	27.414	1.00	52.95	C
ATOM	2848	O	ARG	S	820	33.534	2.606	26.942	1.00	53.06	O
ATOM	2849	CB	ARG	S	820	35.185	5.529	26.898	1.00	52.91	C
ATOM	2850	CG	ARG	S	820	35.620	6.583	25.904	1.00	54.20	C
ATOM	2851	CD	ARG	S	820	37.044	7.046	26.040	1.00	55.94	C
ATOM	2852	NE	ARG	S	820	37.320	8.113	25.081	1.00	58.09	N
ATOM	2853	CZ	ARG	S	820	38.453	8.808	25.022	1.00	59.82	C
ATOM	2854	NH1	ARG	S	820	39.448	8.555	25.867	1.00	60.28	N
ATOM	2855	NH2	ARG	S	820	38.590	9.765	24.108	1.00	60.61	N
ATOM	2856	N	ALA	S	821	33.106	3.994	28.670	1.00	53.36	N
ATOM	2857	CA	ALA	S	821	32.698	2.920	29.561	1.00	53.67	C
ATOM	2858	C	ALA	S	821	31.598	2.094	28.892	1.00	54.08	C
ATOM	2859	O	ALA	S	821	31.648	0.862	28.897	1.00	54.01	O
ATOM	2860	CB	ALA	S	821	32.215	3.479	30.883	1.00	53.55	C
ATOM	2861	N	LEU	S	822	30.616	2.777	28.308	1.00	54.44	N
ATOM	2862	CA	LEU	S	822	29.516	2.110	27.622	1.00	54.93	C
ATOM	2863	C	LEU	S	822	30.007	1.342	26.398	1.00	55.41	C
ATOM	2864	O	LEU	S	822	29.557	0.230	26.143	1.00	55.60	O
ATOM	2865	CB	LEU	S	822	28.445	3.117	27.212	1.00	54.90	C
ATOM	2866	CG	LEU	S	822	27.667	3.756	28.361	1.00	54.80	C
ATOM	2867	CD1	LEU	S	822	26.531	4.601	27.801	1.00	54.39	C
ATOM	2868	CD2	LEU	S	822	27.139	2.702	29.335	1.00	54.48	C
ATOM	2869	N	ASP	S	823	30.911	1.949	25.634	1.00	55.82	N
ATOM	2870	CA	ASP	S	823	31.525	1.282	24.492	1.00	56.04	C
ATOM	2871	C	ASP	S	823	32.893	0.735	24.901	1.00	56.10	C
ATOM	2872	O	ASP	S	823	33.186	-0.451	24.731	1.00	56.09	O
ATOM	2873	CB	ASP	S	823	31.688	2.252	23.320	1.00	56.21	C
ATOM	2874	CG	ASP	S	823	31.858	1.535	21.997	1.00	56.45	C
ATOM	2875	OD1	ASP	S	823	32.245	0.351	22.028	1.00	58.65	O
ATOM	2876	OD2	ASP	S	823	31.628	2.056	20.885	1.00	56.19	O
TER	2877		ASP	S	823						
HETATM	2878	FE	FE2	A	1350	23.294	27.501	28.594	1.00	20.46	FE

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HETATM 2879  C1   OGA A1351      22.091  25.173  27.594  1.00 24.79           C
HETATM 2880  C2   OGA A1351      21.066  25.829  28.202  1.00 24.27           C
HETATM 2881  C4   OGA A1351      18.756  25.714  29.004  1.00 23.09           C
HETATM 2882  C5   OGA A1351      17.415  25.241  28.495  1.00 23.17           C
HETATM 2883  O1   OGA A1351      21.909  24.061  27.090  1.00 25.24           O
HETATM 2884  O2   OGA A1351      23.219  25.658  27.531  1.00 24.40           O
HETATM 2885  O2'  OGA A1351      21.192  26.959  28.711  1.00 21.19           O
HETATM 2886  O3   OGA A1351      16.416  25.662  29.055  1.00 23.03           O
HETATM 2887  N1   OGA A1351      19.886  25.203  28.228  1.00 21.70           N
HETATM 2888  O4   OGA A1351      17.332  24.475  27.537  1.00 23.98           O
HETATM 2889  S    SO4 A1352       0.316  25.182  43.602  1.00 77.77           S
HETATM 2890  O1   SO4 A1352       1.239  25.980  44.403  1.00 77.64           O
HETATM 2891  O2   SO4 A1352       1.075  24.260  42.760  1.00 77.88           O
HETATM 2892  O3   SO4 A1352      -0.525  24.416  44.514  1.00 78.38           O
HETATM 2893  O4   SO4 A1352      -0.507  26.042  42.757  1.00 76.90           O
HETATM 2894  S    SO4 A1353       1.990  28.487  29.834  1.00 69.20           S
HETATM 2895  O1   SO4 A1353       3.243  29.065  30.309  1.00 68.34           O
HETATM 2896  O2   SO4 A1353       2.236  27.438  28.847  1.00 67.90           O
HETATM 2897  O3   SO4 A1353       1.298  27.948  31.009  1.00 70.32           O
HETATM 2898  O4   SO4 A1353       1.162  29.517  29.203  1.00 69.63           O
HETATM 2899  O    HOH H    1     35.955  31.618  40.285  1.00 80.01           O
HETATM 2900  O    HOH H    2     38.513  33.804  31.613  1.00 33.04           O
HETATM 2901  O    HOH H    3     36.648  25.786  38.779  1.00 76.96           O
HETATM 2902  O    HOH H    4     38.106  25.337  29.179  1.00 54.79           O
HETATM 2903  O    HOH H    5     34.990  30.561  34.967  1.00 30.13           O
HETATM 2904  O    HOH H    6     33.934  31.237  38.711  1.00 40.66           O
HETATM 2905  O    HOH H    7     30.766  25.787  37.613  1.00 54.75           O
HETATM 2906  O    HOH H    8     33.667  28.867  40.196  1.00 59.66           O
HETATM 2907  O    HOH H    9     28.622  27.043  37.556  1.00 57.58           O
HETATM 2908  O    HOH H   10     19.894  26.655  33.706  1.00 54.88           O
HETATM 2909  O    HOH H   11     30.052  24.213  35.628  1.00 41.23           O
HETATM 2910  O    HOH H   12     28.737  12.960  37.083  1.00 59.80           O
HETATM 2911  O    HOH H   13     35.568  13.822  23.888  1.00 38.00           O
HETATM 2912  O    HOH H   14     30.722  -1.323  21.296  1.00 48.92           O
HETATM 2913  O    HOH H   15     32.110   2.136  17.673  1.00 69.92           O
HETATM 2914  O    HOH Z    1      9.466  21.720  12.039  1.00 63.79           O
HETATM 2915  O    HOH Z    2      1.367  21.270   7.724  1.00 60.01           O
HETATM 2916  O    HOH Z    3      3.426  13.325   8.811  1.00 43.04           O
HETATM 2917  O    HOH Z    4     -0.760  13.029   7.574  1.00 47.08           O
HETATM 2918  O    HOH Z    5      2.515  19.304   5.195  1.00 46.76           O
HETATM 2919  O    HOH Z    6      4.861  33.534  13.331  1.00 75.60           O
HETATM 2920  O    HOH Z    7      1.403  29.250  13.007  1.00 46.80           O
HETATM 2921  O    HOH Z    8      1.614  32.100  13.758  1.00 66.18           O
HETATM 2922  O    HOH Z    9     12.671  34.540  13.968  1.00 43.83           O
HETATM 2923  O    HOH Z   10     11.399   2.867  17.750  1.00 68.06           O
HETATM 2924  O    HOH Z   11     -1.220  30.205  22.820  1.00 80.54           O
HETATM 2925  O    HOH Z   12      6.576  36.529  29.511  1.00 43.88           O
HETATM 2926  O    HOH Z   13      3.525  32.513  31.866  1.00 65.87           O
HETATM 2927  O    HOH Z   14      5.033  37.447  27.566  1.00 54.03           O
HETATM 2928  O    HOH Z   15     10.981  35.615  30.196  1.00 36.24           O
HETATM 2929  O    HOH Z   16     12.816  42.461  26.787  1.00 37.83           O
HETATM 2930  O    HOH Z   17     13.508  37.138  13.905  1.00 50.79           O
HETATM 2931  O    HOH Z   18     16.409   3.305  16.425  1.00 59.87           O
HETATM 2932  O    HOH Z   19     14.424   4.598  17.530  1.00 54.39           O
HETATM 2933  O    HOH Z   20     11.439   7.927  15.708  1.00 63.10           O
HETATM 2934  O    HOH Z   21     15.821  30.360  12.573  1.00 43.61           O
HETATM 2935  O    HOH Z   22     13.496  22.189   7.246  1.00 57.93           O
HETATM 2936  O    HOH Z   23     17.591  29.863   7.160  1.00 49.97           O
HETATM 2937  O    HOH Z   24     14.617  26.200  13.898  1.00 48.56           O
HETATM 2938  O    HOH Z   25     20.840  23.785   3.695  1.00 38.79           O
HETATM 2939  O    HOH Z   26     27.946  19.151   9.101  1.00 43.14           O
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HETATM 2940  O   HOH Z  27    23.279 21.788  0.672 1.00 62.23         O
HETATM 2941  O   HOH Z  28    27.443 22.009 43.177 1.00 68.81         O
HETATM 2942  O   HOH Z  29    27.326 30.900  5.769 1.00 84.31         O
HETATM 2943  O   HOH Z  30    16.938 35.662 41.749 1.00 51.88         O
HETATM 2944  O   HOH Z  31    36.792 29.262 21.033 1.00 42.38         O
HETATM 2945  O   HOH Z· 32    26.719 37.403 13.167 1.00 60.20         O
HETATM 2946  O   HOH Z  33    29.797 37.021 10.379 1.00 60.24         O
HETATM 2947  O   HOH Z  34    28.365 37.713 15.023 1.00 68.08         O
HETATM 2948  O   HOH Z  35    27.471 34.815  9.298 1.00 63.90         O
HETATM 2949  O   HOH Z  36    .24.262 32.919 12.792 1.00 45.02        O
HETATM 2950  O   HOH Z  37    19.704 17.909 13.178 1.00 28.78         O
HETATM 2951  O   HOH. Z  38    22.022 12.870  8.792 1.00 48.37        O
HETATM 2952  O   HOH Z  39    18.151 14.971 12.982 1.00 36.76         O
HETATM 2953  O   HOH Z  40    29.160  5.439 16.977 1.00 44.05         O
HETATM 2954  O   HOH Z  41    18.863 14.590 16.204 1.00 30.84         O
HETATM 2955  O   HOH Z  42    12.149  5.293 13.385 1.00 72.13         O
HETATM 2956  O   HOH Z  43    15.651  2.782 13.845 1.00 41.52         O
HETATM 2957  O   HOH Z  44    14.014  7.467 18.234 1.00 52.22         O
HETATM 2958  O   HOH Z  45     5.548 12.548 27.846 1.00 38.03         O
HETATM 2959 .O   HOH Z  46    12.742  5.782 36.187 1.00 51.07         O
HETATM 2960  O   HOH Z  47    19.063  6.567 36.600 1.00 49.16         O
HETATM 2961  O.  HOH Z  48    19.545  2.633 38.104 1.00 67.28         O
HETATM 2962  O·  HOH Z  49     7.710 14.276 19.473 1.00 48.41         O
HETATM 2963  O   HOH Z  50    15.732  7.234 38.833 1.00 54.12         O
HETATM 2964  O   HOH Z  51    21.932 13.291 44.351 1.00 62.49         O
HETATM 2965  O   HOH Z  52    33·.998 44.086 25.334 1.00 53.56        O
HETATM 2966  O   HOH Z  53    12.673 21.178 43.612 1.00 63.01         O
HETATM 2967  O   HOH Z  54     8.172 26.738 .44.107 1.00 61.46        O
HETATM 2968  O   HOH Z  55     9.613 30.854  42.520 1.00 54.56        O
HETATM 2969  O   HOH Z  56    13.563 35.806 31.131 1.00 39.09         O
HETATM 2970  O   HOH Z .57    15.688 37.473 35.304 1.00 47.58         O
HETATM 2971  O   HOH Z  58     7.422 43.868 25.982 1.00 75.57         O
HETATM 2972 .O   HOH Z  59     7.978 38.223 34.865 1.00 59.51         O
HETATM 2973  O   HOH Z  60    16.338 30.836 40.223 1.00 38.80         O
HETATM 2974  O   HOH Z  61    17.035 27.760 38.288 1.00 52.22         O
HETATM 2975  O   HOH Z  62    22.131 25.023 41.390 1.00 55.16         O
HETATM 2976  O   HOH Z  63    29.869 29.910 39.122 1.00 47.28         O
HETATM 2977  O   HOH Z  64    28.353 24.399 41.766 1.00 60.35         O
HETATM 2978  O   HOH Z  65    31.794 27.570 41.962 1.00 48.59         O
HETATM 2979  O   HOH Z  66    28.058 28.695 48.927 1.00 65.95         O
HETATM 2980  O   HOH Z  67    24.838 24.783 42.190 1.00 52.90         O
HETATM 2981  O   HOH Z  68    11.541 32.183 15.082 1.00 63.99         O
HETATM 2982  O   HOH Z  69    31.599 33.767 45.823 1.00 44.28         O
HETATM 2983  O   HOH Z  70    24.728 38.721 49.282 1.00 48.25         O
HETATM 2984  O   HOH Z  71    16.271 36.399 44.087 1.00 58.46         O
HETATM 2985  O   HOH Z  72    17.845 37.716 46.244 1.00 57.93         O
HETATM 2986  O   HOH Z  73    16.480 33.117 41.520 1.00 59.15         O
HETATM 2987  O   HOH Z  74    40.791 21.415 26.920 1.00 58.98         O
HETATM 2988  O   HOH Z  75·   21.842 17.819 48.106 1.00 67.11         O
HETATM 2989  O   HOH Z  76     8.791 17.468 46.626 1.00 63.28         O
HETATM 2990  O   HOH Z  77    17.141 16.914 47.607 1.00 52.87         O
HETATM 2991  O   HOH Z  78    21.626 14.804 40.702 1.00 53.91         O
HETATM 2992  O   HOH Z  79    39.117 50.091 47.735 1.00 57.17         O
HETATM 2993  O   HOH Z  80    10.617 19.257 44.587 1.00 69.00         O
HETATM 2994  O   HOH Z  81     1.682 24.435 36.842 1.00 55.40         O
HETATM 2995  O   HOH Z  82     4.627 30.781 36.487 1.00 53.38         O
HETATM 2996  O   HOH Z  83    17.463 26.906 33.818 1.00 38.64         O
HETATM 2997  O   HOH Z  84    18.429 25.785 36.464 1.00 54.65         O
HETATM 2998  O   HOH Z  85    23.466 17.336 36.578 1.00 41.94         O
HETATM 2999  O   HOH Z  86    26.890 12.949 30.365 1.00 49.34         O
·HETATM 3000  O   HOH Z  87    21.694 10.405 34.333 1.00 45.95        .O
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HETATM 3001  O    HOH Z  88      20.030    9.589   36.847  1.00 52.33           O
HETATM 3002  O    HOH Z  89      18.447   -1.706   32.981  1.00 66.29           O
HETATM 3003  O    HOH Z  90      16.300   -0.205   30.017  1.00 50.70           O
HETATM 3004  O    HOH Z  91      17.950    1.645   20.589  1.00 51.55           O
HETATM 3005  O    HOH Z  92      26.301    5.439·   16.918  1.00 36.67           O
HETATM 3006  O    HOH Z· 93      33.944   10.218   13.383  1.00 51.60           O
HETATM 3007  O    HOH Z  94      30.893   16.371   11.174  1.00 40.00           O
HETATM 3008  O    HOH Z  95      32.606   13.689   20.709  1.00 45.01           O
HETATM 3009  O    HOH Z  96      31.860   10.158    7.765  1.00 58.55           O
HETATM 3010  O    HOH Z  97      36.957   10.422    7.614  1.00 76.91           O
HETATM 3011  O    HOH Z  98      35.951   16.836   31.735  1.00 59.28           O
HETATM 3012  O    HOH Z  99      39.867   18.412   27.150  1.00 50.38           O
HETATM 3013  O    HOH Z 100      13.436   20.952   28.355  1.00 27.89           O
HETATM 3014  O    HOH Z 101       3.992   21.265   30.540  1.00 43.76           O
HETATM 3015  O    HOH Z 102      30.735   37.910   33.103  1.00 30.45           O
HETATM 3016  O    HOH Z 103      25.986   26.303   26.047  1.00 26.08           O
HETATM 3017  O    HOH Z 104      36.837   32.025   33.001  1.00 37.86           O
HETATM 3018  O    HOH Z 105      35.845   25.360   27.653  1.00 33.53           O
HETATM 3019  O    HOH Z 106      31.874   20.474   33.040  1.00 55.47           O
HETATM 3020  O    HOH Z 107      36.793   26.619   20.918  1.00 34.57·          O
HETATM 3021  O    HOH Z 108      17.114   16.909   17.862  .1.00 35.83          O
HETATM 3022  O    HOH Z 109       9.968   13.510   19.464  1.00 37.10           O
HETATM 3023  O    HOH Z 110       5.274   16.717   22.023  1.00 44.26           O
HETATM 3024  O    HOH Z 111       7.041   16.862   20.149  1.00 37.71           O
HETATM 3025  O    HOH Z 112       6.517   22.763   22.963  1.00 38.94           O
HETATM 3026  O    HOH Z 113      29.471   38.812   26.249  1.00 22.19           O
HETATM 3027  O    HOH Z 114      32.253   43.121   24.229  1.00 53.95           O
HETATM 3028  O    HOH Z 115      28.797   40.227   16.136  1.00 64.15           O
HETATM 3029  O    HOH Z 116      30.645   39.042   18·925  1.00 33.21           O
HETATM 3030  O    HOH Z 117      25.466   42.302   17.883  1.00 64.00           O
HETATM 3031  O    HOH Z 118      27.698   44.486   31.068  1.00 26.13           O
HETATM 3032  O    HOH Z 119      30.274   44.879   25.031  1.00 38.32           O
HETATM 3033  O    HOH Z 120      27.635   48.525   29.776  1.00 35.59           O
HETATM 3034  O    HOH Z 121 ·    25.933   50.527   30.463  1.00 35.79           O
HETATM 3035  O    HOH Z 122      26.614   31.094   38.158  1.00 32.11           O
HETATM 3036  O    HOH Z 123      29.486   36.934   35.226  1.00 27.40           O
HETATM 3037  O    HOH Z 124      30.510   30.229   36.300  1.00 31.99           O
HETATM 3038  O    HOH Z 125      19.859   31.575   33.786  1.00 31.77           O
HETATM 3039  O    HOH Z 126      18.490   38.301   36.415  1.00 43.54           O
HETATM 3040  O    HOH Z 127      19.538   36.155   33.217  1.00 30.91           O
HETATM 3041  O    HOH Z 128      25.386   44.358   40.124·  1.00 54.33          O
HETATM 3042  O    HOH Z 129      21.227   42.704   39.938  1.00 38.88           O
HETATM 3043  O    HOH Z 130      17.603   37.763   31.961  1.00 35.39           O
HETATM 3044  O    HOH Z 131       9.290   41.007   35.589  1.00 51.53           O
HETATM 3045  O    HOH Z 132       9.348   43.374   27.752  1.00 61.17           O
HETATM 3046  O    HOH Z 133      15.089   37.816   32.481  1.00 32.05           O
HETATM 3047  O    HOH Z 134      10.824   48.278   31.295  1.00 52.52           O
HETATM 3048  O    HOH Z 135      15.691   44.668   34.824  1.00 31.47           O
HETATM 3049  O    HOH Z 136     ·15.962   46.870   38.981  1.00 51.42           O
HETATM 3050  O    HOH Z 137     ·13.481   51.613   32.894  1.00 45.77           O
HETATM 3051  O    HOH Z 138      14.202   48.658   24.558  1.00 43.59           O
HETATM 3052  O    HOH Z 139      16.193   44.497   37.574  1.00 58.87           O
HETATM 3053  O    HOH Z 140      15.573   46.265   24.419  1.00 39.51           O
HETATM 3054  O    HOH Z 141      18.684   55.873   28.304  1.00 58.28           O
HETATM 3055  O    HOH Z 142      14.817   55.477   27.388  1.00 52.87           O
HETATM 3056  O    HOH Z 143      15.284   50.258   22.000  1.00 32.96           O
HETATM 3057  O    HOH Z 144      23.651   46.151   19.718  1.00 33.04           O
HETATM 3058  O    HOH Z 145      16.751   46.565   21.800  1.00 33.97           O
HETATM 3059  O    HOH Z 146      12.595  ·29.171   13.536  1.00 39.79           O
HETATM 3060  O    HOH Z 147      10.812   19.188   14.084  1.00 50.88           O
HETATM 3061  O    HOH Z 148      11.495   21.508   13.792  1.00 44.23           O
```

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HETATM 3062  O   HOH Z 149      14.521  18.471  12.156  1.00 37.16           O
HETATM 3063  O   HOH Z 150      33.566  26.082  16.801  1.00 38.34           O
HETATM 3064  O   HOH Z 151      27.798  27.494  24.390  1.00 25.11           O
HETATM 3065  O   HOH Z 152      30.253  36.176  26.688  1.00 27.79           O
HETATM 3066  O   HOH Z 153      32.762  34.069  19.065  1.00 47.61           O
HETATM 3067  O   HOH Z 154      27.363  30.094  25.612  1.00 23.74           O
HETATM 3068  O   HOH Z 155      16.282  36.168  29.566  1.00 33.13           O
HETATM 3069  O   HOH Z 156      13.289  26.522  28.472  1.00 47.17           O
HETATM 3070  O   HOH Z 157       7.556  30.888  24.716  1.00 44.35           O
HETATM 3071  O   HOH Z 158       7.790  30.392  27.265  1.00 37.71           O
HETATM 3072  O   HOH Z 159       3.910  21.360  21.198  1.00 60.23           O
HETATM 3073  O   HOH Z 160       6.411  23.837  25.422  1.00 40.51           O
HETATM 3074  O   HOH Z 161       3.001  17.561  27.759  1.00 55.61           O
HETATM 3075  O   HOH Z 162       5.352  18.754  24.064  1.00 42.17           O
HETATM 3076  O   HOH Z 163      40.897  21.985  24.633  1.00 54.83           O
HETATM 3077  O   HOH Z 164      42.626  37.977  17.732  1.00 71.69           O
HETATM 3078  O   HOH Z 165      42.463  44.114  19.559  1.00 54.59           O
HETATM 3079  O   HOH Z 166      33.754  36.855  19.984  1.00 36.17           O
HETATM 3080  O   HOH Z 167      33.194  39.271  33.406  1.00 28.26           O
HETATM 3081  O   HOH Z 168      37.482  29.751  37.743  1.00 57.74           O
HETATM 3082  O   HOH Z 169      38.789  34.566  42.752  1.00 40.46           O
HETATM 3083  O   HOH Z 170      32.020  40.390  44.008  1.00 38.46           O
HETATM 3084  O   HOH Z 171      31.865  44.151  45.174  1.00 45.64           O
HETATM 3085  O   HOH Z 172      41.427  43.475  51.164  1.00 50.64           O
HETATM 3086  O   HOH Z 173      38.498  47.344  48.085  1.00 60.19           O
HETATM 3087  O   HOH Z 174      35.239  52.784  45.826  1.00 54.63           O
HETATM 3088  O   HOH Z 175      32.343  51.933  45.286  1.00 58.03           O
HETATM 3089  O   HOH Z 176      39.267  57.239  41.745  1.00 26.45           O
HETATM 3090  O   HOH Z 177      32.755  59.287  44.804  1.00 60.46           O
HETATM 3091  O   HOH Z 178      46.839  53.182  31.757  1.00 31.38           O
HETATM 3092  O   HOH Z 179      37.840  55.111  29.241  1.00 44.20           O
CONECT 1478 2878
CONECT 1498 2878
CONECT 2167 2878
CONECT 2878 2885 2884 1478 2167 1498
CONECT 2879 2880 2883 2884
CONECT 2880 2879 2885 2887
CONECT 2881 2882 2887
CONECT 2882 2881 2886 2888
CONECT 2883 2879
CONECT 2884 2879 2878
CONECT 2885 2880 2878
CONECT 2886 2882
CONECT 2887 2880 2881
CONECT 2888 2882
CONECT 2889 2890 2891 2892 2893
CONECT 2890 2889
CONECT 2891 2889
CONECT 2892 2889
CONECT 2893 2889
CONECT 2894 2895 2896 2897 2898
CONECT 2895 2894
CONECT 2896 2894
CONECT 2897 2894
CONECT 2898 2894
MASTER        455      0      4     15     20      0      7      6 3090      2     24     31
END
```

Structure 2

Below are the coordinates for structure 2 (the 2.25 Å structure of FIH:Fe(II):2OG:CAD):

```
HEADER     TRANSCRIPTION ACTIVATOR/INHIBITOR      12-AUG-02   1H2L
TITLE      FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX WITH HIF-1 ALPHA
TITLE     2 FRAGMENT PEPTIDE
COMPND     MOL_ID: 1;
COMPND    2 MOLECULE: FACTOR INHIBITING HIF1;
COMPND    3 CHAIN: A;
COMPND    4 ENGINEERED: YES;
COMPND    5 MOL_ID: 2;
COMPND    6 MOLECULE: HYPOXIA-INDUCIBLE FACTOR 1 ALPHA;
COMPND    7 SYNONYM: HIF-1 ALPHA, ARNT INTERACTING PROTEIN,
COMPND    8  MEMBER OF PAS PROTEIN 1;
COMPND    9 CHAIN: S;
COMPND    10 FRAGMENT: C-TERMINAL TRANSACTIVATION DOMAIN FRAGMENT
COMPND    11  RESIDUES 786-826
SOURCE     MOL_ID: 1;
SOURCE    2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE    3 ORGANISM_COMMON: HUMAN;
SOURCE    4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE    5 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE    6 EXPRESSION_SYSTEM_PLASMID: PET28A(+);
SOURCE    7 MOL_ID: 2;
SOURCE    8 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE    9 ORGANISM_COMMON: HUMAN;
SOURCE    10 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE    11 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE    12 EXPRESSION_SYSTEM_PLASMID: PGEX-GP-1
KEYWDS     FIH, HIF, DSBH, OXYGENASE, TRANSCRIPTION, HYPOXIA,
KEYWDS    2 2-OXOGLUTARATE, ASPARAGINYL HYDROXYLASE, HYDROXYLASE
EXPDTA     X-RAY DIFFRACTION
AUTHOR     J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,I.SCHLEMMINGER,
AUTHOR    2 J.F.SEIBEL,C.J.SCHOFIELD
REVDAT    1   04-SEP-02 1H2L    0
JRNL        AUTH   J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,
JRNL        AUTH 2 I.SCHLEMMINGER,J.F.SEIBEL,C.J.SCHOFIELD
JRNL        TITL   FIH:HIF-FRAGMENT COMPLEXES
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK   2
REMARK   2 RESOLUTION. 2.25 ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM    : REFMAC 5.0
REMARK   3   AUTHORS    : MURSHUDOV,VAGIN,DODSON
REMARK   3
REMARK   3   REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3 DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) :   2.25
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) :  38.00
REMARK   3   DATA CUTOFF            (SIGMA(F)) : NONE
REMARK   3   COMPLETENESS FOR RANGE        (%) :  99.98
REMARK   3   NUMBER OF REFLECTIONS             :   25127
REMARK   3
REMARK   3 FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
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REMARK   3   FREE R VALUE TEST SET SELECTION    : RANDOM
REMARK   3   R VALUE         (WORKING + TEST SET) : 0.18514
REMARK   3   R VALUE                 (WORKING SET) :  0.18253
REMARK   3   FREE R VALUE                          :  0.21738
REMARK   3   FREE R VALUE TEST SET SIZE     (%) :  7.7
REMARK   3   FREE R VALUE TEST SET COUNT        :  2104
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3    TOTAL NUMBER OF BINS USED              :      20
REMARK   3    BIN RESOLUTION RANGE HIGH            :    2.250
REMARK   3    BIN RESOLUTION RANGE LOW             :    2.308
REMARK   3    REFLECTION IN BIN       (WORKING SET) :    1783
REMARK   3    BIN R VALUE             (WORKING SET) :    0.194
REMARK   3    BIN FREE R VALUE SET COUNT           :      170
REMARK   3    BIN FREE R VALUE                      :    0.228
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3    PROTEIN ATOMS            : 2863
REMARK   3    NUCLEIC ACID ATOMS       : 0
REMARK   3    HETEROGEN ATOMS          : 21
REMARK   3    SOLVENT ATOMS          . : 139
REMARK   3
REMARK   3  B VALUES.
REMARK   3    FROM WILSON PLOT           (A**2) : NULL
REMARK   3    MEAN B VALUE        (OVERALL, A**2) :   27.234
REMARK   3    OVERALL ANISOTROPIC B VALUE.
REMARK   3     B11 (A**2) :      -0.40
REMARK   3     B22 (A**2) :      -0.40
REMARK   3     B33 (A**2) :       0.80
REMARK   3     B12 (A**2) :       0.00
REMARK   3     B13 (A**2) :       0.00
REMARK   3     B23 (A**2) :       0.00
REMARK   3
REMARK   3 ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                            (A): 0.203
REMARK   3   ESU BASED ON FREE R VALUE                       (A): 0.174
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                 (A): 0.165
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 6.444
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
REMARK   3   CORRELATION COEFFICIENT FO-FC       :   0.956
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE :   0.939
REMARK   3
REMARK   3 RMS DEVIATIONS FROM IDEAL VALUES     COUNT     RMS     WEIGHT
REMARK   3   BOND LENGTHS REFINED              (A): 2961 ; 0.013 ; 0.021
REMARK   3   BOND LENGTHS REFINED              (A): 2961 ; 0.013 ; 0.021
REMARK   3   BOND LENGTHS OTHERS               (A): 2554 ; 0.001 ; 0.020
REMARK   3   BOND ANGLES REFINED        (DEGREES): 4026 ; 1.404 ; 1.949
REMARK   3   BOND ANGLES OTHERS         (DEGREES): 5966 ; 0.727 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1 (DEGREES):  350 ; 4.037 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 3 (DEGREES):  515 ;18.189 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS      (A**3):  413 ; 0.085 ; 0.200
REMARK   3   GENERAL PLANES REFINED            (A): 3315 ; 0.005 ; 0.020
REMARK   3   GENERAL PLANES OTHERS             (A):  602 ; 0.002 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED       (A):  693 ; 0.221 ; 0.300
REMARK   3   NON-BONDED CONTACTS OTHERS        (A): 2483 ; 0.204 ; 0.300
REMARK   3   H-BOND (X...Y) REFINED            (A):  208 ; 0.156 ; 0.500
REMARK   3   SYMMETRY VDW REFINED              (A):   16 ; 0.256 ; 0.300
REMARK   3   SYMMETRY VDW OTHERS               (A):   63 ; 0.259 ; 0.300
REMARK   3   SYMMETRY H-BOND REFINED           (A):   10 ; 0.200 ; 0.500
REMARK   3
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REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.  COUNT   RMS    WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED     (A**2): 1767 ; 0.649 ; 1.500
REMARK   3   MAIN-CHAIN ANGLE REFINED    (A**2): 2847 ; 1.227 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED     (A**2): 1194 ; 1.887 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED    (A**2): 1179 ; 3.111 ; 4.500
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3  TLS DETAILS
REMARK   3   NUMBER OF TLS GROUPS  :     1
REMARK   3
REMARK   3   TLS GROUP :     1
REMARK   3    NUMBER OF COMPONENTS GROUP :     2
REMARK   3    COMPONENTS          C SSSEQI    TO  C SSSEQI
REMARK   3    RESIDUE RANGE :    A    15       A    451
REMARK   3    RESIDUE RANGE :    S   795       S    822
REMARK   3    ORIGIN FOR THE GROUP (A):  22.2240  27.6230  28.5830
REMARK   3    T TENSOR
REMARK   3      T11:    0.1744 T22:    0.0216
REMARK   3      T33:    0.0949 T12:   -0.0059
REMARK   3      T13:   -0.0546 T23:    0.0427
REMARK   3    L TENSOR
REMARK   3      L11:    1.1183 L22:    2.4664
REMARK   3      L33:    1.3415 L12:    0.7934
REMARK   3      L13:    0.5409 L23:    1.2249
REMARK   3    S TENSOR
REMARK   3      S11:    0.0358 S12:   -0.1772 S13:   -0.0521
REMARK   3      S21:    0.1763 S22:    0.0025 S23:    0.1089
REMARK   3      S31:    0.2114 S32:   -0.0339 S33:   -0.0383
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS    :  1.40
REMARK   3   ION PROBE RADIUS    :  0.80
REMARK   3   SHRINKAGE RADIUS    :  0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: HYDROGENS HAVE BEEN ADDED IN THE
REMARK   3    RIDING POSITIONS
REMARK   4
REMARK   4 1H2L COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY EBI  ON 12-AUG-2002.
REMARK 100 THE EBI ID CODE IS EBI-11172.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 15-MAY-2002
REMARK 200  TEMPERATURE          (KELVIN)  : 100
REMARK 200  PH                             : 7.5
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON          (Y/N)     : Y
REMARK 200  RADIATION SOURCE               : SRS BEAMLINE PX14.2
REMARK 200  BEAMLINE                       : PX14.2
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE  (M/L)   : M
REMARK 200  WAVELENGTH OR RANGE      (A)   : 0.983
REMARK 200  MONOCHROMATOR                  : NULL
REMARK 200  OPTICS                         : NULL
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REMARK 200
REMARK 200   DETECTOR TYPE                       : CCD
REMARK 200   DETECTOR MANUFACTURER               : ADSC
REMARK 200   INTENSITY-INTEGRATION SOFTWARE      : MOSFLM
REMARK 200   DATA SCALING SOFTWARE               : SCALA
REMARK 200
REMARK 200   NUMBER OF UNIQUE REFLECTIONS        : 27294
REMARK 200   RESOLUTION RANGE HIGH      (A)      : 2.25
REMARK 200   RESOLUTION RANGE LOW       (A)      : 38.63
REMARK 200   REJECTION CRITERIA  (SIGMA(I))      : NONE
REMARK 200
REMARK 200 OVERALL.
REMARK 200   COMPLETENESS FOR RANGE     (%)      : 100.0
REMARK 200   DATA REDUNDANCY                     : 7.0
REMARK 200   R MERGE                    (I)      : 0.058
REMARK 200   R SYM                      (I)      : NULL
REMARK 200   <I/SIGMA(I)> FOR THE DATA SET       : 9.7
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200   HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.25
REMARK 200   HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.37
REMARK 200   COMPLETENESS FOR SHELL     (%)      : 100.0
REMARK 200   DATA REDUNDANCY IN SHELL            : 7.2
REMARK 200   R MERGE FOR SHELL          (I)      : 0.307
REMARK 200   R SYM FOR SHELL            (I)      : NULL
REMARK 200   <I/SIGMA(I)> FOR SHELL              : 2.5
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS   (%): 63
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.4
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 1.2M AMMONIUM SULPHATE, 4% PEG400,
REMARK 280  0.1M HEPES PH7.5, ARGON ATMOSPHERE, 11MG/ML PROTEIN WITH
REMARK 280  1MM FE(II), 2.5MM AKG AND 2.5MM PEPTIDE
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 41 21 2
REMARK 290
REMARK 290        SYMOP    SYMMETRY
REMARK 290        NNNMMM   OPERATOR
REMARK 290         1555    X,Y,Z
REMARK 290         2555    -X,-Y,1/2+Z
REMARK 290         3555    1/2-Y,1/2+X,1/4+Z
REMARK 290         4555    1/2+Y,1/2-X,3/4+Z
REMARK 290         5555    1/2-X,1/2+Y,1/4-Z
REMARK 290         6555    1/2+X,1/2-Y,3/4-Z
REMARK 290         7555    Y,X,-Z
REMARK 290         8555    -Y,-X,1/2-Z
REMARK 290
REMARK 290        WHERE NNN -> OPERATOR NUMBER
REMARK 290              MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
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```
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290    SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290    SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290    SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290    SMTRY1   2 -1.000000  0.000000  0.000000        0.00000
REMARK 290    SMTRY2   2  0.000000 -1.000000  0.000000        0.00000
REMARK 290    SMTRY3   2  0.000000  0.000000  1.000000       73.95700
REMARK 290    SMTRY1   3  0.000000 -1.000000  0.000000       43.13200
REMARK 290    SMTRY2   3  1.000000  0.000000  0.000000       43.13200
REMARK 290    SMTRY3   3  0.000000  0.000000  1.000000       36.97850
REMARK 290    SMTRY1   4  0.000000  1.000000  0.000000       43.13200
REMARK 290    SMTRY2   4 -1.000000  0.000000  0.000000       43.13200
REMARK 290    SMTRY3   4  0.000000  0.000000  1.000000      110.93550
REMARK 290    SMTRY1   5 -1.000000  0.000000  0.000000       43.13200
REMARK 290    SMTRY2   5  0.000000  1.000000  0.000000       43.13200
REMARK 290    SMTRY3   5  0.000000  0.000000 -1.000000       36.97850
REMARK 290    SMTRY1   6  1.000000  0.000000  0.000000       43.13200
REMARK 290    SMTRY2   6  0.000000 -1.000000  0.000000       43.13200
REMARK 290    SMTRY3   6  0.000000  0.000000 -1.000000      110.93550
REMARK 290    SMTRY1   7  0.000000  1.000000  0.000000        0.00000
REMARK 290    SMTRY2   7  1.000000  0.000000  0.000000        0.00000
REMARK 290    SMTRY3   7  0.000000  0.000000 -1.000000        0.00000
REMARK 290    SMTRY1   8  0.000000 -1.000000  0.000000        0.00000
REMARK 290    SMTRY2   8 -1.000000  0.000000  0.000000        0.00000
REMARK 290    SMTRY3   8  0.000000  0.000000 -1.000000       73.95700
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF   2 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 300
REMARK 300 QUATERNARY STRUCTURE FOR THIS ENTRY: TETRAMERIC
REMARK 300
REMARK 300 THE PROTEIN IS A HOMODIMER FORMED BY CHAIN A.
REMARK 300 A HETERODIMERIC ASSOCIATION OF CHAIN A WITH CHAIN S
REMARK 300 PRODUCES A TETRAMER.
REMARK 300
REMARK 300 THE BURIED SURFACE AREA SHOWN BELOW IS AN AVERAGE
REMARK 300 CALCULATED FOR THE HETEROTETRAMER AND DOES NOT
REMARK 300 CORRESPOND TO THE BURIED SURFACE AREA FOR THE
REMARK 300 HOMODIMER OF CHAIN A
REMARK 300
REMARK 300 THE HETERO-ASSEMBLY DESCRIBED BY REMARK 350 APPEARS
REMARK 300 TO BE A CASE OF STRONG CRYSTAL PACKING WITH
REMARK 300 THE MEAN DIFFERENCE IN ACCESSIBLE SURFACE AREA PER
REMARK 300 CHAIN BETWEEN THE ISOLATED CHAIN AND THAT FOR
REMARK 300 THE CHAIN IN THE COMPLEX IS   2141.3 ANGSTROM**2
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE:  1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A, S
REMARK 350    BIOMT1   1  1.000000  0.000000  0.000000        0.00000
```

```
REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 350   BIOMT1   2  0.000000 -1.000000  0.000000       86.26400
REMARK 350   BIOMT2   2 -1.000000  0.000000  0.000000       86.26400
REMARK 350   BIOMT3   2  0.000000  0.000000 -1.000000       73.95700
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A    1
REMARK 465     ALA A    2
REMARK 465     ALA A    3
REMARK 465     THR A    4
REMARK 465     ALA A    5
REMARK 465     ALA A    6
REMARK 465     GLU A    7
REMARK 465     ALA A    8
REMARK 465     VAL A    9
REMARK 465     ALA A   10
REMARK 465     SER A   11
REMARK 465     GLY A   12
REMARK 465     SER A   13
REMARK 465     GLY A   14
REMARK 465     LYS A  304
REMARK 465     ARG A  305
REMARK 465     ILE A  306
REMARK 465     SER S  786
REMARK 465     MET S  787
REMARK 465     ASP S  788
REMARK 465     GLU S  789
REMARK 465     SER S  790
REMARK 465     GLY S  791
REMARK 465     LEU S  792
REMARK 465     PRO S  793
REMARK 465     GLN S  794
REMARK 465     GLN S  807
REMARK 465     GLY S  808
REMARK 465     SER S  809
REMARK 465     ARG S  810
REMARK 465     ASN S  811
REMARK 465     LEU S  812
REMARK 465     ASP S  823
REMARK 465     GLN S  824
REMARK 465     VAL S  825
REMARK 465     ASN S  826
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS (M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI   ATOMS
REMARK 470     GLU A  15    CG   CD   OE1  OE2
REMARK 470     GLU A  29    CG   CD   OE1  OE2
REMARK 470     ASN A  87    CG   OD1  ND2
REMARK 470     LYS A 106    CD   CE   NZ
REMARK 470     ARG A 117    CG   CD   NE   CZ   NH1  NH2
REMARK 470     GLN A 133    CG   CD   OE1  NE2
REMARK 470     GLN A 136    CG   CD   OE1  NE2
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REMARK 470     GLN A 137    CG   CD   OE1  NE2
REMARK 470     ARG A 156    CG   CD   NE   CZ   NH1  NH2
REMARK 470     LYS A 157    CD   CE   NZ
REMARK 470     LYS A 311    CG   CD   CE   NZ
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD AND BY MORE THAN 0.150 ANGSTROMS (M=MODEL
REMARK 500 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 500 NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,1X,2(A4,A1,3X),12X,F5.3)
REMARK 500
REMARK 500 EXPECTED VALUESS: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2    DEVIATION
REMARK 500    MET A 343  SD     MET A 343  CE       -0.243
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI            DISTANCE
REMARK 500
REMARK 500  O    ALA A   300    OH   TYR S   798              2.18
REMARK 525
REMARK 525 SOLVENT
REMARK 525
REMARK 525 THE SOLVENT MOLECULES ARE GIVEN CHAIN IDENTIFIERS TO
REMARK 525 INDICATE THE PROTEIN CHAIN TO WHICH THEY ARE MOST CLOSELY
REMARK 525 ASSOCIATED WITH:
REMARK 525    PROTEIN CHAIN  SOLVENT CHAIN
REMARK 525      A              Z
REMARK 525      S              H
REMARK 600
REMARK 600 HETEROGEN
REMARK 600
REMARK 600 FOR METAL ATOM FE    FE2 A1350   THE COORDINATION ANGLES ARE:
REMARK 600 1 HIS    199A  NE2
REMARK 600 2 ASP    201A  OD2       103.4
REMARK 600 3 HIS    279A  NE2        83.1  86.0
REMARK 600 4 AKG   1351A  O1        168.9  87.6  98.2
REMARK 600 5 AKG   1351A  O5         87.0 169.4  97.2  81.9
REMARK 600                            1     2     3     4
REMARK 700
REMARK 700 SHEET
REMARK 700 THE SHEET STRUCTURE OF THIS MOLECULE IS BIFURCATED. IN
REMARK 700 ORDER TO REPRESENT THIS FEATURE IN THE SHEET RECORDS BELOW,
REMARK 700 TWO SHEETS ARE DEFINED.
REMARK 800
REMARK 800 SITE
REMARK 800 SITE_IDENTIFIER: FE1
REMARK 800 SITE_DESCRIPTION: FE BINDING SITE FOR CHAIN A
REMARK 800
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REMARK 800 SITE_IDENTIFIER: AKG
REMARK 800 SITE_DESCRIPTION: AKG BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SO1
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SO2
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1D7G    RELATED DB: PDB
REMARK 900  A MODEL FOR THE COMPLEX BETWEEN THE
REMARK 900  HYPOXIA-INDUCIBLE FACTOR-1 (HIF-1) AND ITS
REMARK 900   CONSENSUS DEOXYRIBONUCLEIC ACID SEQUENCE
REMARK 900 RELATED ID: 1H2K    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2M    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2N    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1L8C    RELATED DB: PDB
REMARK 900  STRUCTURAL BASIS FOR HIF-1ALPHA/CBP
REMARK 900  RECOGNITION IN THECELLULAR HYPOXIC RESPONSE
REMARK 900 RELATED ID: 1LM8    RELATED DB: PDB
REMARK 900  STRUCTURE OF A HIF-1A-PVHL-ELONGINB-
REMARK 900  ELONGINC COMPLEX
REMARK 900 RELATED ID: 1LQB    RELATED DB: PDB
REMARK 900  CRYSTAL STRUCTURE OF A HYDROXYLATED HIF-1
REMARK 900  ALPHA PEPTIDEBOUND TO THE PVHL/ELONGIN-C/
REMARK 900  ELONGIN-B COMPLEX
DBREF  1H2L A    1   349  SWS    Q969Q7   Q969Q7          1     349
DBREF  1H2L S  786   826  SWS    Q16665   HIFA_HUMAN      786   826
SEQRES   1 A  349  MET ALA ALA THR ALA ALA GLU ALA VAL ALA SER GLY SER
SEQRES   2 A  349  GLY GLU PRO ARG GLU GLU ALA GLY ALA LEU GLY PRO ALA
SEQRES   3 A  349  TRP ASP GLU SER GLN LEU ARG SER TYR SER PHE PRO THR
SEQRES   4 A  349  ARG PRO ILE PRO ARG LEU SER GLN SER ASP PRO ARG ALA
SEQRES   5 A  349  GLU GLU LEU ILE GLU ASN GLU GLU PRO VAL VAL LEU THR
SEQRES   6 A  349  ASP THR ASN LEU VAL TYR PRO ALA LEU LYS TRP ASP LEU
SEQRES   7 A  349  GLU TYR LEU GLN GLU ASN ILE GLY ASN GLY ASP PHE SER
SEQRES   8 A  349  VAL TYR SER ALA SER THR HIS LYS PHE LEU TYR TYR ASP
SEQRES   9 A  349  GLU LYS LYS MET ALA ASN PHE GLN ASN PHE LYS PRO ARG
SEQRES  10 A  349  SER ASN ARG GLU GLU MET LYS PHE HIS GLU PHE VAL GLU
SEQRES  11 A  349  LYS LEU GLN ASP ILE GLN GLN ARG GLY GLY GLU GLU ARG
SEQRES  12 A  349  LEU TYR LEU GLN GLN THR LEU ASN ASP THR VAL GLY ARG
SEQRES  13 A  349  LYS ILE VAL MET ASP PHE LEU GLY PHE ASN TRP ASN TRP
SEQRES  14 A  349  ILE ASN LYS GLN GLN GLY LYS ARG GLY TRP GLY GLN LEU
SEQRES  15 A  349  THR SER ASN LEU LEU LEU ILE GLY MET GLU GLY ASN VAL
SEQRES  16 A  349  THR PRO ALA HIS TYR ASP GLU GLN GLN ASN PHE PHE ALA
SEQRES  17 A  349  GLN ILE LYS GLY TYR LYS ARG CYS ILE LEU PHE PRO PRO
SEQRES  18 A  349  ASP GLN PHE GLU CYS LEU TYR PRO TYR PRO VAL HIS HIS
SEQRES  19 A  349  PRO CYS ASP ARG GLN SER GLN VAL ASP PHE ASP ASN PRO
SEQRES  20 A  349  ASP TYR GLU ARG PHE PRO ASN PHE GLN ASN VAL VAL GLY
SEQRES  21 A  349  TYR GLU THR VAL VAL GLY PRO GLY ASP VAL LEU TYR ILE
SEQRES  22 A  349  PRO MET TYR TRP TRP HIS HIS ILE GLU SER LEU LEU ASN
SEQRES  23 A  349  GLY GLY ILE THR ILE THR VAL ASN PHE TRP TYR LYS GLY
SEQRES  24 A  349  ALA PRO THR PRO LYS ARG ILE GLU TYR PRO LEU LYS ALA
SEQRES  25 A  349  HIS GLN LYS VAL ALA ILE MET ARG ASN ILE GLU LYS MET
SEQRES  26 A  349  LEU GLY GLU ALA LEU GLY ASN PRO GLN GLU VAL GLY PRO
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SEQRES  27 A  349    LEU LEU ASN THR MET ILE LYS GLY ARG TYR ASN
SEQRES   1 S   41    SER MET ASP GLU SER GLY LEU PRO GLN LEU THR SER TYR
SEQRES   2 S   41    ASP CYS GLU VAL ASN ALA PRO ILE GLN GLY SER ARG ASN
SEQRES   3 S   41    LEU LEU GLN GLY GLU GLU LEU LEU ARG ALA LEU ASP GLN
SEQRES   4 S   41    VAL ASN
HET    FE2  A1350       1
HET    AKG  A1351      10
HET    SO4  A1352       5
HET    SO4  A1353       5
HETNAM     FE2 FE (II) ION
HETNAM     AKG 2-OXYGLUTARIC ACID
HETNAM     SO4 SULFATE ION
FORMUL   3  FE2    FE1 2+
FORMUL   4  AKG    C5 H6 O5
FORMUL   5  SO4    2(O4 S1 2-)
FORMUL   6  HOH   *139(H2 O1)
HELIX    1   1 ASP A   28  LEU A   32  5                                5
HELIX    2   2 ASP A   49  ASN A   58  1                               10
HELIX    3   3 VAL A   70  TRP A   76  5                                7
HELIX    4   4 ASP A   77  ILE A   85  1                                9
HELIX    5   5 ASP A  104  PHE A  111  5                                8
HELIX    6   6 LYS A  124  ARG A  138  1                               15
HELIX    7   7 GLY A  155  GLY A  164  1                               10
HELIX    8   8 ASN A  166  GLY A  178  1                               13
HELIX    9   9 PRO A  220  ASP A  222  5                                3
HELIX   10  10 GLN A  223  TYR A  228  1                                6
HELIX   11  11 PHE A  252  VAL A  258  5                                7
HELIX   12  12 LYS A  311  GLY A  331  1                               21
HELIX   13  13 ASN A  332  GLN A  334  5                                3
HELIX   14  14 GLU A  335  LYS A  345  1                               11
HELIX   15  15 GLN S  814  LEU S  822  1                                9
SHEET    1  AA 5 THR A  39  PRO A  41  0
SHEET    2  AA 5 GLY A 260  VAL A 265  1  O  GLY A 260   N  ARG A  40
SHEET    3  AA 5 LYS A 214  PHE A 219 -1  O  LYS A 214   N  VAL A 265
SHEET    4  AA 5 TRP A 278  SER A 283 -1  O  TRP A 278   N  PHE A 219
SHEET    5  AA 5 VAL A 195  HIS A 199 -1  O  THR A 196   N  ILE A 281
SHEET    1  AB 6 ARG A  44  LEU A  45  0
SHEET    2  AB 6 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AB 6 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AB 6 GLN A 204  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AB 6 THR A 290  TYR A 297 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AB 6 LEU A 182  SER A 184 -1  N  THR A 183   O  TRP A 296
SHEET    1  AC 9 ARG A  44  LEU A  45  0
SHEET    2  AC 9 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AC 9 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AC 9 GLN A 204  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AC 9 THR A 290  TYR A 297 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AC 9 LEU A 186  GLY A 190 -1  O  LEU A 186   N  ASN A 294
SHEET    7  AC 9 ARG A 143  THR A 149 -1  O  LEU A 146   N  ILE A 189
SHEET    8  AC 9 PHE A  90  ALA A  95 -1  O  SER A  91   N  GLN A 147
SHEET    9  AC 9 SER A 118  MET A 123 -1  O  ASN A 119   N  SER A  94
LINK         FE   FE2 A1350                 NE2 HIS A 199     1555   1555
LINK         FE   FE2 A1350                 OD2 ASP A 201     1555   1555
LINK         FE   FE2 A1350                 NE2 HIS A 279     1555   1555
LINK         FE   FE2 A1350                 O1  AKG A1351     1555   1555
LINK         FE   FE2 A1350                 O5  AKG A1351     1555   1555
CISPEP   1 TYR A  308    PRO A  309          0         1.27
SITE     1 FE1  3 HIS A 199  ASP A 201  HIS A 279
SITE     1 AKG 12 TYR A 145  THR A 196  HIS A 199  ASP A 201
SITE     2 AKG 12 ASN A 205  PHE A 207  LYS A 214  HIS A 279
SITE     3 AKG 12 ILE A 281  ASN A 294  TRP A 296  HOH Z  65
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SITE      1 SO1   4 ARG A 138   GLY A 140   GLU A 141   GLU A 142
SITE      1 SO2   5 ARG A 143   GLU A 192   GLY A 193   LEU A 285
SITE      2 SO2   5 ASN A 286
CRYST1   86.264    86.264   147.914   90.00    90.00    90.00 P 41 21 2      8
ORIGX1        1.000000  0.000000  0.000000         0.00000
ORIGX2        0.000000  1.000000  0.000000  .      0.00000
ORIGX3        0.000000  0.000000  1.000000         0.00000
SCALE1        0.011592  0.000000  0.000000         0.00000
SCALE2        0.000000  0.011592  0.000000         0.00000
SCALE3        0.000000  0.000000  0.006761         0.00000
ATOM     ·1   N    GLU A  15        8.505   32.866    9.893  1.00 61.72           N
ATOM      2   CA   GLU A  15        7.173   32.223    9.682  1.00 61.95           C
ATOM      3   C    GLU A  15        7.251   30.749   10.070  1.00 61.54           C
ATOM      4   O    GLU A  15        8.109   30.026    9.581  1.00 61.66           O
ATOM      5   CB   GLU A  15        6.724   32.375    8·.234  1.00 62.08           C
ATOM      6   N    PRO A  16        6.353   30.305   10.941  1.00 61.24           N
ATOM      7   CA   PRO A  16        6.386   28.928   11.455  1.00 60.97           C
ATOM      8   C    PRO A  16        6.342   27.853   10.368  1.00 60.27           C
ATOM      9   O    PRO A  16        5.494   27.879    9.479  1.00 60.01           O
ATOM     10   CB   PRO A  16        5.134   28.849   12.333  1.00 61.10           C
ATOM     11   CG   PRO A  16        4.790   30.262   12·.653  1.00 61.53           C
ATOM     12   CD   PRO A  16        5.228   31.079   11.488  1.00 61.35           C
ATOM     13   N    ARG A  17        7.256   26.900   10.464  1.00 59.45           N
ATOM     14   CA   ARG A  17        7.348   25.820    9.494  1.00 59.05           C
ATOM     15   C    ARG A  17        6.083   24.971    9.478  1.00·57.86           C
ATOM     16   O    ARG A  17        5.312   24.963   10.437  1.00 57.86           O
ATOM     17   CB   ARG A  17        8.541   24.913    9.827  1.00 59.53           C
ATOM     18   CG   ARG A · 17        9.906   25.621    9.859  1.00 60.69           C
ATOM     19   CD   ARG A  17       11.080   24.696   10.194  1.00 62.32           C
ATOM     20   NE   ARG A  17       11.040   24.185   11.567  1.00 63.73           N
ATOM     21   CZ   ARG A  17       11.464   24.852   12.649  1.00 65.28           C
ATOM     22   NH1  ARG A  17       11.962   26.085   12.544  1.00 65.01           N
ATOM     23   NH2  ARG A  17       11.385   24.282   13.848  1.00 65.09           N
ATOM     24   N    GLU A  18        5.878   24.254    8.382  1.00 56.26           N
ATOM     25   CA   GLU A  18        4.749 . 23.351    8.273  1.00 55.12           C
ATOM     26   C    GLU A  18        5.222   21.931    8.587  1.00 53.54           C
ATOM     27   O    GLU A  18        6.214   21.468    8.031  1.00 52.86           O
ATOM     28   CB   GLU A  18        4.150   23.406    6.867  1.00 55.33           C
ATOM     29 · CG   GLU A  18        3.482   24.731    6.519  1.00 56.39           C
ATOM     30   CD   GLU A  18        2.100   24.904    7.137  1.00 57.19           C
ATOM     31   OE1  GLU A  18        1.559   23.935    7.718  1.00 56.35 ·         O
ATOM     32   OE2  GLU A  18        1.548   26.023    7.028  1.00 58.12           O · ·
ATOM     33   N    GLU A  19        4.526   21.260    9.501  1.00 51.73           N
ATOM     34   CA   GLU A  19        4.823   19.867    9.816  1.00 50.56           C
ATOM     35   C    GLU A  19        4.409   18.944    8.663  1.00 48.36           C
ATOM     36   O    GLU A  19        3.312   19.066    8.102  1.00 47.54           O
ATOM     37   CB   GLU A  19        4.115   19.422   11.100  1.00 51.05           C
ATOM     38   CG   GLU A  19        4.577   20.139   12.360  1.00 53.53           C
ATOM     39   CD   GLU A  19        4.363   19.323   13.638  1.00 57.67           C
ATOM     40   OE1  GLU A  19        3.906   18.146   13.561  1.00 59.24           O
ATOM     41   OE2  GLU A  19        4.663   19.864   14.735  1.00 59.50           O
ATOM     42   N    ALA A  20      . 5.314   18.035    8.320  1.00 46.04           N
ATOM     43   CA   ALA A  20        5.100   17.030    7.283  1.00 44.66           C
ATOM     44   C    ALA A  20        3.741   16.365    7.394  1.00 42.92           C
ATOM     45   O    ALA A  20        3.230   16.154    8.491  1.00 42.14           O
ATOM     46   CB   ALA A  20        6.182   15.965    7.360  1.00 44.46           C
ATOM     47   N    GLY A  21        3.173   16.025    6.247  1.00 41.16           N
ATOM     48   CA   GLY A  21        1.897   15.341    6.215  1.00 40.22           C
ATOM     49   C    GLY A  21        0.757   16.300    6.480  1.00 39.27           C
ATOM     50   O    GLY A  21       -0.309   15.895    6.908  1.00 38.03           O
ATOM     51   N    ALA A  22        1.005   17.584    6.240  1.00 38.86           N
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ATOM	52	CA	ALA	A	22	-0.018	18.611	6.371	1.00	38.79	C
ATOM	53	C	ALA	A	22	-0.618	18.613	7.758	1.00	38.64	C
ATOM	54	O	ALA	A	22	-1.820	18.759	7.924	1.00	38.07	O
ATOM	55	CB	ALA	A	22	-1.102	18.409	5.324	1.00	38.68	C
ATOM	56	N	LEU	A	23	0.231	18.451	8.760	1.00	39.07	N
ATOM	57	CA	LEU	A	23	-0.233	18.473	10.135	1.00	39.72	C
ATOM	58	C	LEU	A	23	-0.290	19.886	10.692	1.00	39.39	C
ATOM	59	O	LEU	A	23	-0.464	20.075	11.880	1.00	39.41	O
ATOM	60	CB	LEU	A	23	0.642	17.574	11.003	1.00	40.11	C
ATOM	61	CG	LEU	A	23	0.528	16.118	10.558	1.00	41.82	C
ATOM	62	CD1	LEU	A	23	1.414	15.185	11.384	1.00	43.18	C
ATOM	63	CD2	LEU	A	23	-0.916	15.673	10.633	1.00	43.43	C
ATOM	64	N	GLY	A	24	-0.156	20.879	9.823	1.00	39.21	N
ATOM	65	CA	GLY	A	24	-0.290	22.258	10.237	1.00	39.16	C
ATOM	66	C	GLY	A	24	0.964	22.862	10.820	1.00	39.21	C
ATOM	67	O	GLY	A	24	2.011	22.219	10.916	1.00	39.16	O
ATOM	68	N	PRO	A	25	0.854	24.118	11.223	1.00	39.08	N
ATOM	69	CA	PRO	A	25	1.997	24.830	11.775	1.00	38.84	C
ATOM	70	C	PRO	A	25	2.410	24.197	13.086	1.00	38.68	C
ATOM	71	O	PRO	A	25	1.572	23.842	13.914	1.00	38.08	O
ATOM	72	CB	PRO	A	25	1.477	26.259	12.001	1.00	38.76	C
ATOM	73	CG	PRO	A	25	-0.004	26.197	11.895	1.00	39.12	C
ATOM	74	CD	PRO	A	25	-0.375	24.930	11.210	1.00	39.17	C
ATOM	75	N	ALA	A	26	3.713	24.037	13.246	1.00	38.92	N
ATOM	76	CA	ALA	A	26	4.269	23.489	14.467	1.00	39.38	C
ATOM	77	C	ALA	A	26	3.924	24.381	15.676	1.00	38.73	C
ATOM	78	O	ALA	A	26	3.677	23.882	16.772	1.00	39.39	O
ATOM	79	CB	ALA	A	26	5.762	23.347	14.319	1.00	39.60	C
ATOM	80	N	TRP	A	27	3.871	25.687	15.468	1.00	37.43	N
ATOM	81	CA	TRP	A	27	3.516	26.602	16.543	1.00	36.82	C
ATOM	82	C	TRP	A	27	3.034	27.919	15.941	1.00	36.10	C
ATOM	83	O	TRP	A	27	3.013	28.074	14.731	1.00	35.54	O
ATOM	84	CB	TRP	A	27	4.746	26.835	17.424	1.00	36.91	C
ATOM	85	CG	TRP	A	27	5.949	27.019	16.596	1.00	36.01	C
ATOM	86	CD1	TRP	A	27	6.770	26.041	16.089	1.00	36.29	C
ATOM	87	CD2	TRP	A	27	6.450	28.249	16.107	1.00	34.41	C
ATOM	88	NE1	TRP	A	27	7.761	26.610	15.324	1.00	36.06	N
ATOM	89	CE2	TRP	A	27	7.592	27.966	15.332	1.00	34.97	C
ATOM	90	CE3	TRP	A	27	6.066	29.568	16.263	1.00	34.24	C
ATOM	91	CZ2	TRP	A	27	8.332	28.947	14.720	1.00	36.39	C
ATOM	92	CZ3	TRP	A	27	6.808	30.539	15.664	1.00	36.24	C
ATOM	93	CH2	TRP	A	27	7.927	30.225	14.890	1.00	36.25	C
ATOM	94	N	ASP	A	28	2.620	28.860	16.775	1.00	35.59	N
ATOM	95	CA	ASP	A	28	2.253	30.168	16.267	1.00	35.15	C
ATOM	96	C	ASP	A	28	2.816	31.224	17.160	1.00	33.93	C
ATOM	97	O	ASP	A	28	3.311	30.948	18.250	1.00	33.56	O
ATOM	98	CB	ASP	A	28	0.739	30.338	16.131	1.00	36.08	C
ATOM	99	CG	ASP	A	28	0.038	30.310	17.449	1.00	38.11	C
ATOM	100	OD1	ASP	A	28	-0.096	31.392	18.076	1.00	41.06	O
ATOM	101	OD2	ASP	A	28	-0.392	29.240	17.938	1.00	41.04	O
ATOM	102	N	GLU	A	29	2.737	32.448	16.665	1.00	32.84	N
ATOM	103	CA	GLU	A	29	3.288	33.615	17.330	1.00	31.31	C
ATOM	104	C	GLU	A	29	2.792	33.767	18.756	1.00	29.80	C
ATOM	105	O	GLU	A	29	3.547	34.124	19.639	1.00	29.03	O
ATOM	106	CB	GLU	A	29	2.938	34.841	16.537	1.00	31.81	C
ATOM	107	N	SER	A	30	1.524	33.478	18.989	1.00	28.55	N
ATOM	108	CA	SER	A	30	0.957	33.680	20.314	1.00	28.00	C
ATOM	109	C	SER	A	30	1.613	32.830	21.391	1.00	27.25	C
ATOM	110	O	SER	A	30	1.360	33.035	22.563	1.00	26.88	O
ATOM	111	CB	SER	A	30	-0.546	33.404	20.302	1.00	27.71	C
ATOM	112	OG	SER	A	30	-0.800	32.015	20.328	1.00	28.97	O

ATOM	113	N	GLN A	31	2.434	31.864	20.994	1.00	26.92	N
ATOM	114	CA	GLN A	31	3.089	30.988	21.950	1.00	26.85	C
ATOM	115	C	GLN A	31	4.447	31.558	22.362	1.00	26.63	C
ATOM	116	O	GLN A	31	5.115	30.995	23.220	1.00	25.89	O
ATOM	117	CB	GLN A	31	3.270	29.576	21.375	1.00	26.90	C
ATOM	118	CG	GLN A	31	1.975	28.816	21.097	1.00	27.50	C
ATOM	119	CD	GLN A	31	2.227	27.446	20.480	1.00	27.30	C
ATOM	120	OE1	GLN A	31	2.332	27.330	19.262	1.00	28.39	O
ATOM	121	NE2	GLN A	31	2.354	26.419	21.319	1.00	23.43	N
ATOM	122	N	LEU A	32	4.835	32.682	21.757	1.00	26.56	N
ATOM	123	CA	LEU A	32	6.094	33.351	22.078	1.00	26.88	C
ATOM	124	C	LEU A	32	5.854	34.500	23.047	1.00	26.64	C
ATOM	125	O	LEU A	32	4.875	35.214	22.913	1.00	26.22	O
ATOM	126	CB	LEU A	32	6.743	33.906	20.807	1.00	26.71	C
ATOM	127	CG	LEU A	32	7.054	32.866	19.724	1.00	29.00	C
ATOM	128	CD1	LEU A	32	7.704	33.537	18.535	1.00	31.11	C
ATOM	129	CD2	LEU A	32	7.942	31.773	20.245	1.00	28.07	C
ATOM	130	N	ARG A	33	6.737	34.671	24.026	1.00	26.49	N
ATOM	131	CA	ARG A	33	6.622	35.799	24.957	1.00	26.48	C
ATOM	132	C	ARG A	33	7.070	37.071	24.252	1.00	26.68	C
ATOM	133	O	ARG A	33	7.810	37.025	23.280	1.00	26.97	O
ATOM	134	CB	ARG A	33	7.454	35.554	26.224	1.00	26.44	C
ATOM	135	CG	ARG A	33	7.071	34.261	26.976	1.00	25.53	C
ATOM	136	CD	ARG A	33	7.869	34.029	28.245	1.00	25.76	C
ATOM	137	NE	ARG A	33	7.329	32.926	29.021	1.00	25.87	N
ATOM	138	CZ	ARG A	33	6.418	33.033	29.969	1.00	25.35	C
ATOM	139	NH1	ARG A	33	5.916	34.198	30.309	1.00	24.02	N
ATOM	140	NH2	ARG A	33	6.003	31.941	30.587	1.00	28.18	N
ATOM	141	N	SER A	34	6.643	38.214	24.751	1.00	26.73	N
ATOM	142	CA	SER A	34	6.939	39.469	24.090	1.00	27.21	C
ATOM	143	C	SER A	34	8.021	40.251	24.840	1.00	26.40	C
ATOM	144	O	SER A	34	7.957	40.391	26.046	1.00	25.65	O
ATOM	145	CB	SER A	34	5.657	40.278	24.028	1.00	27.92	C
ATOM	146	OG	SER A	34	5.402	40.780	25.323	1.00	31.78	O
ATOM	147	N	TYR A	35	9.009	40.750	24.110	1.00	26.09	N
ATOM	148	CA	TYR A	35	10.169	41.390	24.711	1.00	26.44	C
ATOM	149	C	TYR A	35	10.412	42.731	24.046	1.00	27.00	C
ATOM	150	O	TYR A	35	9.815	43.009	23.028	1.00	27.14	O
ATOM	151	CB	TYR A	35	11.386	40.479	24.577	1.00	25.83	C
ATOM	152	CG	TYR A	35	11.217	39.198	25.357	1.00	25.49	C
ATOM	153	CD1	TYR A	35	11.041	39.226	26.739	1.00	23.65	C
ATOM	154	CD2	TYR A	35	11.219	37.963	24.723	1.00	23.87	C
ATOM	155	CE1	TYR A	35	10.869	38.063	27.459	1.00	23.41	C
ATOM	156	CE2	TYR A	35	11.061	36.795	25.445	1.00	24.37	C
ATOM	157	CZ	TYR A	35	10.881	36.847	26.809	1.00	22.92	C
ATOM	158	OH	TYR A	35	10.698	35.686	27.522	1.00	23.94	O
ATOM	159	N	SER A	36	11.326	43.531	24.596	1.00	27.45	N
ATOM	160	CA	SER A	36	11.555	44.905	24.127	1.00	27.58	C
ATOM	161	C	SER A	36	12.553	45.092	22.987	1.00	27.13	C
ATOM	162	O	SER A	36	12.764	46.211	22.533	1.00	27.71	O
ATOM	163	CB	SER A	36	12.109	45.724	25.286	1.00	27.62	C
ATOM	164	OG	SER A	36	13.365	45.201	25.697	1.00	27.53	O
ATOM	165	N	PHE A	37	13.181	44.025	22.543	1.00	25.62	N
ATOM	166	CA	PHE A	37	14.263	44.169	21.590	1.00	24.95	C
ATOM	167	C	PHE A	37	13.949	43.447	20.301	1.00	25.32	C
ATOM	168	O	PHE A	37	13.191	42.512	20.274	1.00	25.29	O
ATOM	169	CB	PHE A	37	15.537	43.571	22.185	1.00	23.88	C
ATOM	170	CG	PHE A	37	15.340	42.162	22.731	1.00	22.69	C
ATOM	171	CD1	PHE A	37	15.353	41.077	21.890	1.00	20.43	C
ATOM	172	CD2	PHE A	37	15.104	41.949	24.076	1.00	23.12	C
ATOM	173	CE1	PHE A	37	15.160	39.778	22.386	1.00	22.83	C

ATOM	174	CE2	PHE	A	37	14.920	40.666	24.578	1.00	22.73	C
ATOM	175	CZ	PHE	A	37	14.944	39.585	23.737	1.00	22.04	C
ATOM	176	N	PRO	A	38	14.533	43.907	19.222	1.00	25.57	N
ATOM	177	CA	PRO	A	38	14.396	43.216	17.950	1.00	25.50	C
ATOM	178	C	PRO	A	38	15.321	42.002	17.861	1.00	25.35	C
ATOM	179	O	PRO	A	38	16.280	41.887	18.640	1.00	25.01	O
ATOM	180	CB	PRO	A	38	14.815	44.278	16.944	1.00	25.31	C
ATOM	181	CG	PRO	A	38	15.776	45.181	17.729	1.00	26.61	C
ATOM	182	CD	PRO	A	38	15.271	45.178	19.125	1.00	25.73	C
ATOM	183	N	THR	A	39	15.032	41.124	16.902	1.00	24.60	N
ATOM	184	CA	THR	A	39	15.876	39.979	16.607	1.00	24.58	C
ATOM	185	C	THR	A	39	15.881	39.686	15.112	1.00	25.39	C
ATOM	186	O	THR	A	39	15.004	40.121	14.383	1.00	24.72	O
ATOM	187	CB	THR	A	39	15.364	38.721	17.295	1.00	24.33	C
ATOM	188	OG1	THR	A	39	14.023	38.453	16.860	1.00	21.36	O
ATOM	189	CG2	THR	A	39	15.256	38.892	18.832	1.00	23.91	C
ATOM	190	N	ARG	A	40	16.875	38.912	14.692	1.00	26.09	N
ATOM	191	CA	ARG	A	40	17.000	38.399	13.337	1.00	26.92	C
ATOM	192	C	ARG	A	40	17.057	36.884	13.469	1.00	26.73	C
ATOM	193	O	ARG	A	40	17.407	36.366	14.517	1.00	26.53	O
ATOM	194	CB	ARG	A	40	18.291	38.888	12.696	1.00	27.12	C
ATOM	195	CG	ARG	A	40	18.289	40.360	12.400	1.00	32.37	C
ATOM	196	CD	ARG	A	40	16.925	40.858	11.994	1.00	36.79	C
ATOM	197	NE	ARG	A	40	16.783	41.137	10.583	1.00	41.20	N
ATOM	198	CZ	ARG	A	40	15.617	41.408	10.023	1.00	46.28	C
ATOM	199	NH1	ARG	A	40	14.512	41.388	10.768	1.00	47.83	N
ATOM	200	NH2	ARG	A	40	15.548	41.708	8.731	1.00	48.02	N
ATOM	201	N	PRO	A	41	16.728	36.163	12.413	1.00	26.96	N
ATOM	202	CA	PRO	A	41	16.709	34.706	12.510	1.00	27.17	C
ATOM	203	C	PRO	A	41	18.085	34.054	12.469	1.00	26.50	C
ATOM	204	O	PRO	A	41	19.002	34.538	11.830	1.00	26.34	O
ATOM	205	CB	PRO	A	41	15.867	34.277	11.298	1.00	27.12	C
ATOM	206	CG	PRO	A	41	16.027	35.434	10.296	1.00	27.66	C
ATOM	207	CD	PRO	A	41	16.337	36.661	11.077	1.00	26.70	C
ATOM	208	N	ILE	A	42	18.214	32.951	13.185	1.00	25.35	N
ATOM	209	CA	ILE	A	42	19.400	32.143	13.070	1.00	24.29	C
ATOM	210	C	ILE	A	42	19.161	31.290	11.832	1.00	23.98	C
ATOM	211	O	ILE	A	42	18.050	30.793	11.632	1.00	24.20	O
ATOM	212	CB	ILE	A	42	19.530	31.283	14.302	1.00	24.58	C
ATOM	213	CG1	ILE	A	42	19.779	32.181	15.518	1.00	22.71	C
ATOM	214	CG2	ILE	A	42	20.644	30.233	14.113	1.00	24.95	C
ATOM	215	CD1	ILE	A	42	19.466	31.516	16.837	1.00	22.70	C
ATOM	216	N	PRO	A	43	20.168	31.122	10.989	1.00	23.44	N
ATOM	217	CA	PRO	A	43	20.016	30.276	9.807	1.00	23.74	C
ATOM	218	C	PRO	A	43	19.709	28.802	10.154	1.00	24.82	C
ATOM	219	O	PRO	A	43	20.281	28.292	11.130	1.00	24.03	O
ATOM	220	CB	PRO	A	43	21.372	30.397	9.107	1.00	24.23	C
ATOM	221	CG	PRO	A	43	22.071	31.602	9.740	1.00	23.91	C
ATOM	222	CD	PRO	A	43	21.504	31.737	11.092	1.00	23.12	C
ATOM	223	N	ARG	A	44	18.784	28.178	9.406	1.00	25.20	N
ATOM	224	CA	ARG	A	44	18.439	26.767	9.520	1.00	26.19	C
ATOM	225	C	ARG	A	44	18.977	26.125	8.269	1.00	25.69	C
ATOM	226	O	ARG	A	44	18.563	26.468	7.159	1.00	25.67	O
ATOM	227	CB	ARG	A	44	16.934	26.504	9.513	1.00	27.16	C
ATOM	228	CG	ARG	A	44	16.140	27.062	10.678	1.00	31.24	C
ATOM	229	CD	ARG	A	44	14.653	26.529	10.769	1.00	32.98	C
ATOM	230	NE	ARG	A	44	14.400	25.143	10.311	1.00	34.09	N
ATOM	231	CZ	ARG	A	44	14.258	24.070	11.128	1.00	33.28	C
ATOM	232	NH1	ARG	A	44	14.384	24.177	12.453	1.00	29.63	N
ATOM	233	NH2	ARG	A	44	13.995	22.873	10.617	1.00	34.28	N
ATOM	234	N	LEU	A	45	19.870	25.174	8.433	1.00	24.68	N

ATOM	235	CA	LEU A	45	20.551	24.608	7.302	1.00	24.30	C
ATOM	236	C	LEU A	45	20.768	23.134	7.471	1.00	24.39	C
ATOM	237	O	LEU A	45	20.711	22.623	8.588	1.00	23.97	O
ATOM	238	CB	LEU A	45	21.934	25.233	7.205	1.00	23.42	C
ATOM	239	CG	LEU A	45	21.929	26.724	6.941	1.00	24.95	C
ATOM	240	CD1	LEU A	45·	23.339	27.284	7.080	1.00	26.26	C
ATOM	241	CD2	LEU A	45	21.375	26.953	5.533	1.00	24.54	C
ATOM	242	N	SER A	46	21.092	22.494	6.352	1.00	24.71	N
ATOM	243	CA	SER A	46	21.498	21.119	6.345	1.00	25.24	C
ATOM	244	C	SER A	46	22.930	21.043	6.804	1.00	25.58	C
ATOM	245	O	SER A	46	23.741	21.908	6.522	1.00	24.65	O
ATOM	246	CB	SER A	46	21.401	20.505	4.950	1.00	25.11	C
ATOM	247	OG	SER A	46	21.863	19.150	4.965	1.00	24.50	O
ATOM	248	N	GLN A	47	23.208	19.970	7.517	1.00	26.68	N
ATOM	249	CA	GLN A	47	24.524	19.626	8.011	1.00	27.63	C
ATOM	250	C	GLN A	47	25.510	19.442	6.853	1.00	28.01	C
ATOM	251	O	GLN A	47	26.704	19.613	7.026	1.00	28.15	O
ATOM	252	CB	GLN A	47	24.368	18.317	8.803	1.00	28.89	C
ATOM	253	CG	GLN A	47	25.580	17.447	8.920	1.00	31.28	C
ATOM	254	CD	GLN A	47	25.826	16.556	7.765	1.00	32.33	C
ATOM	255	OE1	GLN A	47	24.906	16.149	7.048	1.00	37.08	O
ATOM	256	NE2	GLN A	47	27.089	16.213	7.576	1.00	35.81	N
ATOM	257	N	SER A	48	25.026	19.086	5.667	1.00	28.11	N
ATOM	258	CA	SER A	48	25.930	18.925	4.524	1.00	28.72	C
ATOM	259	C	SER A	48	26.222	20.262	3.828	1.00	29.21	C
ATOM	260	O	SER A	48	27.068	20.339	2.936	1.00	29.21	O
ATOM	261	CB·	SER A	48	25.343	17.952	3.508	1.00	28.66	C
ATOM	262	OG	SER A	48	24.111	18.440	2.993	1.00	29.43	O
ATOM	263	N	ASP A	49	25.525	21.314	4.236	1.00	29.60	N
ATOM	264	CA	ASP A	49	25.683	22.610	3.596	1.00	30.12	C
ATOM	265	C	ASP A	49	26.949	23.307	4.087	1.00	30.43	C
ATOM	266	O	ASP A	49	27.100	23.565	5.272	1.00	29.60	O
ATOM	267	CB	ASP A	49	24.450	23.458	3.858	1.00	30.26	C
ATOM	268	CG	ASP A	49	24.491	24.792	3.151	1.00	31.74	C
ATOM	269	OD1	ASP A	49	25.589	25.306	2.859	1.00	31.79	O
ATOM	270	OD2	ASP A	49	23.454	25.418	2.878	1.00	34.13	O
ATOM	271	N	PRO A	50	27.829	23.668	3.155	1.00	31.31	N
ATOM	272	CA	PRO A	50	29.123	24.273	3.499	1.00	31.63	C
ATOM	273	C	PRO A	50	28.965	25.514	4.355	1.00	31.72	C
ATOM	274	O	PRO A	50	29.849	25.807	5.164	1.00	31.85	O
ATOM	275	CB	PRO A	50	29.726	24.643	2.124	1.00	31.53	C
ATOM	276	CG	PRO A	50	29.036	23.738	1.168	1.00	32.13	C
ATOM	277	CD	PRO A	50	27.624	23.620	1.697	1.00	31.55	C
ATOM	278	N	ARG A	51	27.875	26.246	4.171	1.00	32.04	N
ATOM	279	CA	ARG A	51	27.648	27.443	4.962	1.00	32.56	C
ATOM	280	C	ARG A	51	27.478	27.078	6.439	1.00	32.09	C
ATOM	281	O	ARG A	51	27.853	27.855	7.322	1.00	31.87	O
ATOM	282	CB	ARG A	51	26.420	28.221	4.464	1.00	32.95	C
ATOM	283	CG	ARG A	51	26.568	28.810	3.064	1.00	34.79	C
ATOM	284	CD	ARG A	51	25.273	29.372	2.480	1.00	35.89	C
ATOM	285	NE	ARG A	51	24.276	28.325	2.228	1.00	37.56	N
ATOM	286	CZ	ARG A	51	22.982	28.564	2.061	1.00	39.54	C
ATOM	287	NH1	ARG A	51	22.531	29.814	2.124	1.00	40.85	N
ATOM	288	NH2	ARG A	51	22.135	27.573	1.823	1.00	38.55	N
ATOM	289	N	ALA A	52	26.932	25.903	6.721	1.00	31.50	N
ATOM	290	CA	ALA A	52	26.769	25.513	8.117	1.00	31.34	C
ATOM	291	C	ALA A	52	28.135	25.310	8.744	1.00	31.24	C
ATOM	292	O	ALA A	52	28.409	25.763	9.865	1.00	30.91	O
ATOM	293	CB	ALA A	52	25.953	24.284	8.236	1.00	31.35	C
ATOM	294	N	GLU A	53	29.005	24.652	8.005	1.00	30.92	N
ATOM	295	CA	GLU A	53	30.332	24.404	8.501	1.00	31.92	C

ATOM	296	C	GLU	A	53	31.059	25.730	8.728	1.00	31.52	C
ATOM	297	O	GLU	A	53	31.766	25.898	9.717	1.00	30.52	O
ATOM	298	CB	GLU	A	53	31.119	23.554	7.525	1.00	32.10	C
ATOM	299	CG	GLU	A	53	32.216	22.795	8.229	1.00	36.08	C
ATOM	300	CD	GLU	A	53	31.776	21.411	8.717	1.00	39.44	C
ATOM	301	OE1	GLU	A	53	30.629	21.234	9.167	1.00	40.34	O
ATOM	302	OE2	GLU	A	53	32.606	20.487	8.652	1.00	43.45	O
ATOM	303	N	GLU	A	54	30.870	26.665	7.808	1.00	31.32	N
ATOM	304	CA	GLU	A	54	31.507	27.968	7.919	1.00	32.09	C
ATOM	305	C	GLU	A	54	31.039	28.685	9.193	1.00	31.07	C
ATOM	306	O	GLU	A	54	31.833	29.295	9.881	1.00	31.27	O
ATOM	307	CB	GLU	A	54	31.218	28.812	6.681	1.00	32.42	C
ATOM	308	CG	GLU	A	54	31.939	30.146	6.669	1.00	37.01	C
ATOM	309	CD	GLU	A	54	31.662	30.966	5.410	1.00	40.45	C
ATOM	310	OE1	GLU	A	54	30.843	30.528	4.558	1.00	41.94	O
ATOM	311	OE2	GLU	A	54	32.268	32.051	5.285	1.00	43.43	O
ATOM	312	N	LEU	A	55	29.761	28.567	9.534	1.00	29.85	N
ATOM	313	CA	LEU	A	55	29.251	29.240	10.708	1.00	28.58	C
ATOM	314	C	LEU	A	55	29.848	28.667	11.983	1.00	27.91	C
ATOM	315	O	LEU	A	55	30.304	29.419	12.841	1.00	26.43	O
ATOM	316	CB	LEU	A	55	27.734	29.179	10.733	1.00	28.61	C
ATOM	317	CG	LEU	A	55	27.097	30.041	9.652	1.00	28.69	C
ATOM	318	CD1	LEU	A	55	25.647	29.633	9.423	1.00	29.69	C
ATOM	319	CD2	LEU	A	55	27.193	31.507	10.005	1.00	27.60	C
ATOM	320	N	ILE	A	56	29.889	27.334	12.086	1.00	27.51	N
ATOM	321	CA	ILE	A	56	30.432	26.679	13.278	1.00	27.49	C
ATOM	322	C	ILE	A	56	31.910	27.014	13.457	1.00	28.32	C
ATOM	323	O	ILE	A	56	32.359	27.353	14.549	1.00	28.51	O
ATOM	324	CB	ILE	A	56	30.260	25.174	13.192	1.00	27.21	C
ATOM	325	CG1	ILE	A	56	28.771	24.787	13.218	1.00	25.69	C
ATOM	326	CG2	ILE	A	56	30.982	24.505	14.354	1.00	27.65	C
ATOM	327	CD1	ILE	A	56	28.484	23.341	12.760	1.00	23.98	C
ATOM	328	N	GLU	A	57	32.645	26.935	12.357	1.00	28.85	N
ATOM	329	CA	GLU	A	57	34.068	27.230	12.308	1.00	29.98	C
ATOM	330	C	GLU	A	57	34.319	28.623	12.837	1.00	30.12	C
ATOM	331	O	GLU	A	57	35.306	28.869	13.524	1.00	31.00	O
ATOM	332	CB	GLU	A	57	34.557	27.137	10.850	1.00	30.52	C
ATOM	333	CG	GLU	A	57	36.003	27.518	10.610	1.00	33.37	C
ATOM	334	CD	GLU	A	57	36.968	26.742	11.482	1.00	38.19	C
ATOM	335	OE1	GLU	A	57	36.689	25.558	11.810	1.00	41.02	O
ATOM	336	OE2	GLU	A	57	38.015	27.329	11.847	1.00	42.74	O
ATOM	337	N	ASN	A	58	33.409	29.527	12.516	1.00	29.57	N
ATOM	338	CA	ASN	A	58	33.516	30.911	12.929	1.00	29.62	C
ATOM	339	C	ASN	A	58	32.852	31.222	14.230	1.00	27.88	C
ATOM	340	O	ASN	A	58	32.690	32.364	14.566	1.00	26.74	O
ATOM	341	CB	ASN	A	58	32.805	31.769	11.918	1.00	30.43	C
ATOM	342	CG	ASN	A	58	33.719	32.439	11.040	1.00	33.87	C
ATOM	343	OD1	ASN	A	58	34.040	31.918	9.965	1.00	36.67	O
ATOM	344	ND2	ASN	A	58	34.189	33.629	11.467	1.00	38.66	N
ATOM	345	N	GLU	A	59	32.396	30.205	14.922	1.00	27.73	N
ATOM	346	CA	GLU	A	59	31.753	30.411	16.205	1.00	27.50	C
ATOM	347	C	GLU	A	59	30.545	31.320	16.104	1.00	26.07	C
ATOM	348	O	GLU	A	59	30.366	32.255	16.861	1.00	25.28	O
ATOM	349	CB	GLU	A	59	32.795	30.867	17.224	1.00	28.12	C
ATOM	350	CG	GLU	A	59	33.720	29.688	17.531	1.00	31.06	C
ATOM	351	CD	GLU	A	59	34.739	29.965	18.604	1.00	35.24	C
ATOM	352	OE1	GLU	A	59	35.826	30.432	18.239	1.00	39.24	O
ATOM	353	OE2	GLU	A	59	34.469	29.698	19.795	1.00	37.54	O
ATOM	354	N	GLU	A	60	29.691	30.982	15.155	1.00	25.70	N
ATOM	355	CA	GLU	A	60	28.417	31.643	14.971	1.00	25.50	C
ATOM	356	C	GLU	A	60	27.345	30.576	14.998	1.00	24.10	C

	357	O	GLU	A	60	27.527	29.479	14.487	1.00	22.92		O
TOM	358	CB	GLU	A	60	28.402	32.404	13.664	1.00	25.96		C
TOM	359	CG	GLU	A	60	29.454	33.497	13.697	1.00	30.39		C
TOM	360	CD	GLU	A	60	29.218	34.599	12.703	1.00	35.90		C
TOM	361	OE1	GLU	A	60	29.281	34.349	11.478	1.00	38.45		O
TOM	362	OE2	GLU	A	60	28.998	35.732	13.165	1.00	43.84		O
TOM	363	N	PRO	A	61	26.203	30.933	15.546	1.00	22.92		N
TOM	364	CA	PRO	A	61	25.112	29.983	15.735	1.00	22.31		C
TOM	365	C	PRO	A	61	24.482	29.519	14.445	1.00	21.76		C
TOM	366	O	PRO	A	61	24.394	30.252	13.474	1.00	21.59		O
TOM	367	CB	PRO	A	61	24.079	30.775	16.525	1.00	22.55		C
TOM	368	CG	PRO	A	61	24.450	32.218	16.380	1.00	21.42		C
TOM	369	CD	PRO	A	61	25.863	32.295	15.967	1.00	22.38		C
TOM	370	N	VAL	A	62	24.032	28.279	14.444	1.00	21.55		N
TOM	371	CA	VAL	A	62	23.306	27.739	13.317	1.00	21.90		C
TOM	372	C	VAL	A	62	22.415	26.622	13.817	1.00	22.38		C
TOM	373	O	VAL	A	62	22.771	25.886	14.757	1.00	22.77		O
TOM	374	CB	VAL	A	62	24.262	27.217	12.218	1.00	22.10		C
TOM	375	CG1	VAL	A	62	25.134	26.112	12.738	1.00	22.89		C
TOM	376	CG2	VAL	A	62	23.486	26.748	11.000	1.00	21.98		C
TOM	377	N	VAL	A	63	21.234	26.517	13.226	1.00	22.90		N
TOM	378	CA	VAL	A	63	20.373	25.398	13.499	1.00	23.20		C
TOM	379	C	VAL	A	63	20.586	24.373	12.378	1.00	23.18		C
TOM	380	O	VAL	A	63	20.395	24.682	11.208	1.00	23.38		O
TOM	381	CB	VAL	A	63	18.880	25.768	13.561	1.00	23.27		C
TOM	382	CG1	VAL	A	63	18.046	24.483	13.754	1.00	24.19		C
TOM	383	CG2	VAL	A	63	18.620	26.695	14.692	1.00	22.51		C
TOM	384	N	LEU	A	64	21.007	23.181	12.756	1.00	23.15		N
TOM	385	CA	LEU	A	64	21.158	22.060	11.835	1.00	24.29		C
TOM	386	C	LEU	A	64	19.904	21.203	11.906	1.00	23.48		C
TOM	387	O	LEU	A	64	19.488	20.816	12.988	1.00	23.20		O
TOM	388	CB	LEU	A	64	22.383	21.235	12.206	1.00	24.79		C
TOM	389	CG	LEU	A	64	23.649	22.089	12.141	1.00	28.22		C
TOM	390	CD1	LEU	A	64	24.810	21.338	12.699	1.00	32.80		C
TOM	391	CD2	LEU	A	64	23.946	22.478	10.719	1.00	30.04		C
TOM	392	N	THR	A	65	19.308	20.910	10.759	1.00	22.79		N
TOM	393	CA	THR	A	65	18.019	20.218	10.740	1.00	23.27		C
TOM	394	C	THR	A	65	18.088	18.730	10.534	1.00	23.05		C
TOM	395	O	THR	A	65	17.102	18.050	10.765	1.00	22.85		O
TOM	396	CB	THR	A	65	17.150	20.724	9.571	1.00	23.53		C
TOM	397	OG1	THR	A	65	17.855	20.496	8.352	1.00	22.75		O
TOM	398	CG2	THR	A	65	16.966	22.226	9.609	1.00	24.78		C
TOM	399	N	ASP	A	66	19.231	18.227	10.093	1.00	23.33		N
TOM	400	CA	ASP	A	66	19.330	16.828	9.731	1.00	23.76		C
TOM	401	C	ASP	A	66	20.581	16.076	10.209	1.00	23.41		C
TOM	402	O	ASP	A	66	21.117	15.265	9.457	1.00	23.64		O
TOM	403	CB	ASP	A	66	19.245	16.732	8.199	1.00	23.97		C
TOM	404	CG	ASP	A	66	20.326	17.517	7.514	1.00	24.64		C
TOM	405	OD1	ASP	A	66	21.175	18.099	8.223	1.00	23.06		O
TOM	406	OD2	ASP	A	66	20.417	17.612	6.268	1.00	26.54		O
TOM	407	N	THR	A	67	21.050	16.336	11.428	1.00	22.72		N
TOM	408	CA	THR	A	67	22.235	15.655	11.912	1.00	21.85		C
TOM	409	C	THR	A	67	21.928	14.246	12.349	1.00	21.26		C
TOM	410	O	THR	A	67	22.813	13.429	12.353	1.00	20.41		O
TOM	411	CB	THR	A	67	22.836	16.345	13.138	1.00	21.92		C
TOM	412	OG1	THR	A	67	21.884	16.347	14.200	1.00	20.59		O
TOM	413	CG2	THR	A	67	23.161	17.822	12.873	1.00	23.29		C
TOM	414	N	ASN	A	68	20.684	13.993	12.752	1.00	20.82		N
TOM	415	CA	ASN	A	68	20.321	12.741	13.386	1.00	21.01		C
TOM	416	C	ASN	A	68	21.146	12.525	14.652	1.00	20.47		C
TOM	417	O	ASN	A	68	21.370	11.377	15.069	1.00	20.06		O

ATOM	418	CB	ASN	A	68	20.516	11.546	12.444	1.00	21.63	C
ATOM	419	CG	ASN	A	68	19.476	11.493	11.340	1.00	22.28	C
ATOM	420	OD1	ASN	A	68	18.276	11.429	11.601	1.00	23.83	O
ATOM	421	ND2	ASN	A	68	19.936	11.492	10.108	1.00	22.82	N
ATOM	422	N	LEU	A	69	21.613	13.617	15.248	1.00	19.86	N
ATOM	423	CA	LEU	A	69	22.442	13.533	16.464	1.00	19.68	C
ATOM	424	C	LEU	A	69	21.814	12.707	17.571	1.00	19.03	C
ATOM	425	O	LEU	A	69	22.492	11.878	18.169	1.00	18.33	O
ATOM	426	CB	LEU	A	69	22.770	14.907	17.009	1.00	19.89	C
ATOM	427	CG	LEU	A	69	23.654	14.999	18.239	1.00	19.87	C
ATOM	428	CD1	LEU	A	69	24.970	14.289	18.035	1.00	20.74	C
ATOM	429	CD2	LEU	A	69	23.911	16.459	18.577	1.00	20.41	C
ATOM	430	N	VAL	A	70	20.538	12.940	17.860	1.00	18.84	N
ATOM	431	CA	VAL	A	70	19.843	12.177	18.894	1.00	18.85	C
ATOM	432	C	VAL	A	70	18.634	11.447	18.339	1.00	19.17	C
ATOM	433	O	VAL	A	70	17.604	11.325	19.000	1.00	18.71	O
ATOM	434	CB	VAL	A	70	19.418	13.038	20.097	1.00	18.97	C
ATOM	435	CG1	VAL	A	70	20.645	13.557	20.812	1.00	20.41	C
ATOM	436	CG2	VAL	A	70	18.513	14.185	19.686	1.00	18.87	C
ATOM	437	N	TYR	A	71	18.796	10.916	17.133	1.00	20.12	N
ATOM	438	CA	TYR	A	71	17.711	10.224	16.454	1.00	20.64	C
ATOM	439	C	TYR	A	71	17.003	9.218	17.377	1.00	20.76	C
ATOM	440	O	TYR	A	71	15.804	9.275	17.507	1.00	20.54	O
ATOM	441	CB	TYR	A	71	18.186	9.591	15.136	1.00	20.75	C
ATOM	442	CG	TYR	A	71	17.243	8.517	14.628	1.00	23.02	C
ATOM	443	CD1	TYR	A	71	16.012	8.837	14.046	1.00	24.62	C
ATOM	444	CD2	TYR	A	71	17.572	7.182	14.754	1.00	22.94	C
ATOM	445	CE1	TYR	A	71	15.132	7.800	13.595	1.00	23.64	C
ATOM	446	CE2	TYR	A	71	16.730	6.174	14.312	1.00	23.48	C
ATOM	447	CZ	TYR	A	71	15.524	6.478	13.730	1.00	24.03	C
ATOM	448	OH	TYR	A	71	14.697	5.422	13.349	1.00	29.55	O
ATOM	449	N	PRO	A	72	17.728	8.356	18.068	1.00	21.35	N
ATOM	450	CA	PRO	A	72	17.080	7.363	18.945	1.00	21.89	C
ATOM	451	C	PRO	A	72	16.296	7.955	20.106	1.00	22.22	C
ATOM	452	O	PRO	A	72	15.432	7.269	20.628	1.00	21.25	O
ATOM	453	CB	PRO	A	72	18.248	6.538	19.493	1.00	21.83	C
ATOM	454	CG	PRO	A	72	19.420	6.849	18.606	1.00	22.53	C
ATOM	455	CD	PRO	A	72	19.192	8.240	18.080	1.00	21.81	C
ATOM	456	N	ALA	A	73	16.568	9.206	20.484	1.00	22.77	N
ATOM	457	CA	ALA	A	73	15.859	9.836	21.605	1.00	23.23	C
ATOM	458	C	ALA	A	73	14.542	10.487	21.178	1.00	23.64	C
ATOM	459	O	ALA	A	73	13.764	10.966	22.014	1.00	23.47	O
ATOM	460	CB	ALA	A	73	16.750	10.860	22.284	1.00	22.77	C
ATOM	461	N	LEU	A	74	14.275	10.507	19.881	1.00	24.25	N
ATOM	462	CA	LEU	A	74	13.057	11.148	19.405	1.00	24.86	C
ATOM	463	C	LEU	A	74	11.792	10.466	19.920	1.00	25.46	C
ATOM	464	O	LEU	A	74	10.729	11.070	19.967	1.00	25.11	O
ATOM	465	CB	LEU	A	74	13.055	11.240	17.881	1.00	24.77	C
ATOM	466	CG	LEU	A	74	14.160	12.161	17.338	1.00	26.74	C
ATOM	467	CD1	LEU	A	74	13.915	12.478	15.867	1.00	28.86	C
ATOM	468	CD2	LEU	A	74	14.288	13.447	18.135	1.00	26.86	C
ATOM	469	N	LYS	A	75	11.908	9.204	20.306	1.00	26.12	N
ATOM	470	CA	LYS	A	75	10.756	8.460	20.814	1.00	26.39	C
ATOM	471	C	LYS	A	75	10.585	8.687	22.309	1.00	26.71	C
ATOM	472	O	LYS	A	75	9.584	8.284	22.875	1.00	26.80	O
ATOM	473	CB	LYS	A	75	10.918	6.963	20.534	1.00	26.36	C
ATOM	474	CG	LYS	A	75	12.141	6.322	21.185	1.00	26.49	C
ATOM	475	CD	LYS	A	75	12.254	4.813	20.838	1.00	27.59	C
ATOM	476	CE	LYS	A	75	13.732	4.367	20.671	1.00	27.21	C
ATOM	477	NZ	LYS	A	75	14.475	4.226	21.912	1.00	24.71	N
ATOM	478	N	TRP	A	76	11.561	9.327	22.950	1.00	26.64	N

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ATOM    479  CA  TRP A  76    11.484   9.557  24.383  1.00 26.78          C
ATOM    480  C   TRP A  76    10.253  10.368  24.770  1.00 27.48          C
ATOM    481  O   TRP A  76     9.889  11.317  24.095  1.00 27.93          O
ATOM    482  CB  TRP A  76    12.717  10.311  24.888  1.00 26.57          C
ATOM    483  CG  TRP A  76    13.963   9.500  24.895  1.00 25.80          C
ATOM    484  CD1 TRP A  76    14.101   8.219  24.486  1.00 24.26          C
ATOM    485  CD2 TRP A  76    15.255   9.917  25.347  1.00 22.71          C
ATOM    486  NE1 TRP A  76    15.399   7.804  24.647  1.00 23.20          N
ATOM    487  CE2 TRP A  76    16.128   8.829  25.178  1.00 22.53          C
ATOM    488  CE3 TRP A  76    15.767  11.107  25.867  1.00 21.96          C
ATOM    489  CZ2 TRP A  76    17.468   8.890  25.520  1.00 22.50          C
ATOM    490  CZ3 TRP A  76    17.090  11.172  26.202  1.00 20.53          C
ATOM    491  CH2 TRP A  76    17.931  10.076  26.029  1.00 22.36          C
ATOM    492  N   ASP A  77     9.639   9.976  25.880  1.00 27.85          N
ATOM    493  CA  ASP A  77     8.532  10.684  26.484  1.00 27.74          C
ATOM    494  C   ASP A  77     8.560  10.277  27.957  1.00 27.45          C
ATOM    495  O   ASP A  77     9.373   9.460  28.336  1.00 27.22          O
ATOM    496  CB  ASP A  77     7.208  10.368  25.800  1.00 27.89          C
ATOM    497  CG  ASP A  77     6.802   8.913  25.903  1.00 29.06          C
ATOM    498  OD1 ASP A  77     7.354   8.108  26.708  1.00 30.51          O
ATOM    499  OD2 ASP A  77     5.894   8.489  25.179  1.00 31.13          O
ATOM    500  N   LEU A  78     7.710  10.847  28.796  1.00 27.47          N
ATOM    501  CA  LEU A  78     7.819  10.578  30.229  1.00 27.63          C
ATOM    502  C   LEU A  78     7.655   9.101  30.542  1.00 27.81          C
ATOM    503  O   LEU A  78     8.386   8.548  31.367  1.00 27.16          O
ATOM    504  CB  LEU A  78     6.818  11.409  31.011  1.00 27.59          C
ATOM    505  CG  LEU A  78     7.007  12.916  30.880  1.00 28.68          C
ATOM    506  CD1 LEU A  78     5.906  13.677  31.612  1.00 28.95          C
ATOM    507  CD2 LEU A  78     8.369  13.328  31.412  1.00 29.32          C
ATOM    508  N   GLU A  79     6.721   8.450  29.860  1.00 28.17          N
ATOM    509  CA  GLU A  79     6.480   7.035  30.102  1.00 28.56          C
ATOM    510  C   GLU A  79     7.715   6.185  29.781  1.00 28.22          C
ATOM    511  O   GLU A  79     8.167   5.388  30.600  1.00 27.73          O
ATOM    512  CB  GLU A  79     5.267   6.540  29.298  1.00 28.87          C
ATOM    513  CG  GLU A  79     5.051   5.049  29.467  1.00 31.45          C
ATOM    514  CD  GLU A  79     3.849   4.516  28.716  1.00 34.79          C
ATOM    515  OE1 GLU A  79     3.422   5.129  27.709  1.00 35.78          O
ATOM    516  OE2 GLU A  79     3.343   3.457  29.144  1.00 37.92          O
ATOM    517  N   TYR A  80     8.260   6.346  28.582  1.00 28.27          N
ATOM    518  CA  TYR A  80     9.452   5.597  28.200  1.00 28.00          C
ATOM    519  C   TYR A  80    10.628   5.873  29.142  1.00 27.64          C
ATOM    520  O   TYR A  80    11.330   4.958  29.563  1.00 27.16          O
ATOM    521  CB  TYR A  80     9.838   5.964  26.787  1.00 28.13          C
ATOM    522  CG  TYR A  80    11.054   5.250  26.246  1.00 27.95          C
ATOM    523  CD1 TYR A  80    10.952   3.991  25.644  1.00 27.39          C
ATOM    524  CD2 TYR A  80    12.300   5.846  26.306  1.00 25.55          C
ATOM    525  CE1 TYR A  80    12.089   3.352  25.128  1.00 26.82          C
ATOM    526  CE2 TYR A  80    13.417   5.224  25.808  1.00 25.50          C
ATOM    527  CZ  TYR A  80    13.320   3.992  25.213  1.00 25.64          C
ATOM    528  OH  TYR A  80    14.467   3.426  24.703  1.00 23.50          O
ATOM    529  N   LEU A  81    10.839   7.135  29.482  1.00 27.51          N
ATOM    530  CA  LEU A  81    11.952   7.477  30.371  1.00 27.75          C
ATOM    531  C   LEU A  81    11.741   6.943  31.801  1.00 27.76          C
ATOM    532  O   LEU A  81    12.682   6.459  32.437  1.00 27.35          O
ATOM    533  CB  LEU A  81    12.194   8.990  30.399  1.00 27.35          C
ATOM    534  CG  LEU A  81    12.659   9.656  29.096  1.00 28.06          C
ATOM    535  CD1 LEU A  81    12.664  11.170  29.269  1.00 28.55          C
ATOM    536  CD2 LEU A  81    14.036   9.192  28.655  1.00 27.65          C
ATOM    537  N   GLN A  82    10.521   7.049  32.313  1.00 28.10          N
ATOM    538  CA  GLN A  82    10.234   6.557  33.656  1.00 28.61          C
ATOM    539  C   GLN A  82    10.525   5.066  33.689  1.00 28.32          C
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ATOM	540	O	GLN	A	82	11.070	4.550	34.643	1.00	28.25	O
ATOM	541	CB	GLN	A	82	8.774	6.805	34.032	1.00	29.04	C
ATOM	542	CG	GLN	A	82	8.325	6.063	35.293	1.00	30.18	C
ATOM	543	CD	GLN	A	82	7.184	6.754	36.042	1.00	32.25	C
ATOM	544	OE1	GLN	A	82	6.642	7.758	35.594	1.00	34.51	O
ATOM	545	NE2	GLN	A	82	6.822	6.204	37.189	1.00	36.79	N
ATOM	546	N	GLU	A	83	10.193	4.397	32.601	1.00	28.58	N
ATOM	547	CA	GLU	A	83	10.349	2.950	32.492	1.00	28.70	C
ATOM	548	C	GLU	A	83	11.801	2.515	32.314	1.00	28.14	C
ATOM	549	O	GLU	A	83	12.166	1.424	32.713	1.00	27.54	O
ATOM	550	CB	GLU	A	83	9.506	2.438	31.319	1.00	28.53	C
ATOM	551	CG	GLU	A	83	9.562	0.937	31.101	1.00	30.76	C
ATOM	552	CD	GLU	A	83	8.985	0.150	32.265	1.00	33.31	C
ATOM	553	OE1	GLU	A	83	8.172	0.713	33.030	1.00	35.22	O
ATOM	554	OE2	GLU	A	83	9.352	-1.033	32.428	1.00	35.98	O
ATOM	555	N	ASN	A	84	12.644	3.374	31.753	1.00	27.44	N
ATOM	556	CA	ASN	A	84	13.985	2.938	31.400	1.00	27.09	C
ATOM	557	C	ASN	A	84	15.168	3.729	31.913	1.00	27.31	C
ATOM	558	O	ASN	A	84	16.291	3.276	31.759	1.00	27.17	O
ATOM	559	CB	ASN	A	84	14.099	2.917	29.879	1.00	27.17	C
ATOM	560	CG	ASN	A	84	13.226	1.890	29.254	1.00	26.24	C
ATOM	561	OD1	ASN	A	84	13.361	0.696	29.532	1.00	27.49	O
ATOM	562	ND2	ASN	A	84	12.312	2.333	28.413	1.00	23.37	N
ATOM	563	N	ILE	A	85	14.952	4.893	32.511	1.00	27.52	N
ATOM	564	CA	ILE	A	85	16.088	5.734	32.861	1.00	28.25	C
ATOM	565	C	ILE	A	85	16.788	5.390	34.185	1.00	28.03	C
ATOM	566	O	ILE	A	85	17.700	6.094	34.610	1.00	28.40	O
ATOM	567	CB	ILE	A	85	15.684	7.221	32.801	1.00	28.23	C
ATOM	568	CG1	ILE	A	85	16.872	8.069	32.342	1.00	29.61	C
ATOM	569	CG2	ILE	A	85	15.143	7.694	34.139	1.00	29.11	C
ATOM	570	CD1	ILE	A	85	16.520	9.535	31.996	1.00	28.97	C
ATOM	571	N	GLY	A	86	16.368	4.317	34.833	1.00	28.14	N
ATOM	572	CA	GLY	A	86	17.014	3.874	36.061	1.00	28.15	C
ATOM	573	C	GLY	A	86	16.478	4.504	37.335	1.00	28.11	C
ATOM	574	O	GLY	A	86	15.494	5.251	37.308	1.00	27.93	O
ATOM	575	N	ASN	A	87	17.162	4.220	38.444	1.00	27.96	N
ATOM	576	CA	ASN	A	87	16.754	4.672	39.767	1.00	27.88	C
ATOM	577	C	ASN	A	87	17.736	5.677	40.373	1.00	27.82	C
ATOM	578	O	ASN	A	87	17.751	5.886	41.585	1.00	27.63	O
ATOM	579	CB	ASN	A	87	16.571	3.447	40.713	1.00	27.89	C
ATOM	580	N	GLY	A	88	18.559	6.301	39.538	1.00	28.21	N
ATOM	581	CA	GLY	A	88	19.478	7.336	40.006	1.00	28.18	C
ATOM	582	C	GLY	A	88	18.706	8.584	40.396	1.00	28.19	C
ATOM	583	O	GLY	A	88	17.520	8.676	40.097	1.00	28.62	O
ATOM	584	N	ASP	A	89	19.357	9.530	41.068	1.00	27.99	N
ATOM	585	CA	ASP	A	89	18.707	10.781	41.468	1.00	28.09	C
ATOM	586	C	ASP	A	89	18.655	11.806	40.335	1.00	28.00	C
ATOM	587	O	ASP	A	89	19.557	11.866	39.507	1.00	28.07	O
ATOM	588	CB	ASP	A	89	19.467	11.433	42.613	1.00	28.24	C
ATOM	589	CG	ASP	A	89	19.249	10.747	43.935	1.00	28.53	C
ATOM	590	OD1	ASP	A	89	18.398	9.843	44.024	1.00	30.26	O
ATOM	591	OD2	ASP	A	89	19.884	11.070	44.955	1.00	29.31	O
ATOM	592	N	PHE	A	90	17.620	12.637	40.330	1.00	27.56	N
ATOM	593	CA	PHE	A	90	17.510	13.687	39.332	1.00	27.37	C
ATOM	594	C	PHE	A	90	17.291	15.037	39.993	1.00	27.78	C
ATOM	595	O	PHE	A	90	16.453	15.171	40.884	1.00	27.69	O
ATOM	596	CB	PHE	A	90	16.378	13.388	38.351	1.00	27.05	C
ATOM	597	CG	PHE	A	90	16.678	12.262	37.408	1.00	25.85	C
ATOM	598	CD1	PHE	A	90	16.525	10.943	37.806	1.00	25.70	C
ATOM	599	CD2	PHE	A	90	17.119	12.521	36.121	1.00	26.20	C
ATOM	600	CE1	PHE	A	90	16.797	9.908	36.943	1.00	24.06	C

ATOM	601	CE2	PHE	A	90	17.395	11.489	35.248	1.00	25.49	C
ATOM	602	CZ	PHE	A	90	17.235	10.176	35.666	1.00	25.33	C
ATOM	603	N	SER	A	91	18.062	16.033	39.560	1.00	27.85	N
ATOM	604	CA	SER	A	91	17.902	17.384	40.075	1.00	28.17	C
ATOM	605	C	SER	A	91	16.695	18.023	39.419	1.00	28.48	C
ATOM	606	O	SER	A	91	16.589	18.085	38.192	1.00	28.35	O
ATOM	607	CB	SER	A	91	19.149	18.236	39.838	1.00	27.86	C
ATOM	608	OG	SER	A	91	20.260	17.652	40.485	1.00	27.15	O
ATOM	609	N	VAL	A	92	15.784	18.482	40.261	1.00	29.05	N
ATOM	610	CA	VAL	A	92	14.585	19.141	39.812	1.00	29.67	C
ATOM	611	C	VAL	A	92	14.437	20.465	40.529	1.00	30.31	C
ATOM	612	O	VAL	A	92	14.442	20.537	41.763	1.00	30.37	O
ATOM	613	CB	VAL	A	92	13.352	18.313	40.106	1.00	29.81	C
ATOM	614	CG1	VAL	A	92	12.106	19.026	39.582	1.00	29.93	C
ATOM	615	CG2	VAL	A	92	13.490	16.930	39.507	1.00	29.60	C
ATOM	616	N	TYR	A	93	14.329	21.516	39.732	1.00	31.00	N
ATOM	617	CA	TYR	A	93	14.135	22.845	40.241	1.00	31.29	C
ATOM	618	C	TYR	A	93	12.662	23.113	40.298	1.00	31.54	C
ATOM	619	O	TYR	A	93	11.892	22.701	39.423	1.00	31.35	O
ATOM	620	CB	TYR	A	93	14.829	23.853	39.345	1.00	31.87	C
ATOM	621	CG	TYR	A	93	16.310	23.711	39.436	1.00	33.05	C
ATOM	622	CD1	TYR	A	93	17.012	24.283	40.482	1.00	34.67	C
ATOM	623	CD2	TYR	A	93	16.998	22.954	38.525	1.00	34.24	C
ATOM	624	CE1	TYR	A	93	18.357	24.125	40.593	1.00	35.09	C
ATOM	625	CE2	TYR	A	93	18.338	22.789	38.634	1.00	36.36	C
ATOM	626	CZ	TYR	A	93	19.011	23.379	39.670	1.00	36.33	C
ATOM	627	OH	TYR	A	93	20.357	23.204	39.772	1.00	40.81	O
ATOM	628	N	SER	A	94	12.286	23.813	41.351	1.00	32.03	N
ATOM	629	CA	SER	A	94	10.919	24.182	41.599	1.00	32.31	C
ATOM	630	C	SER	A	94	10.884	25.692	41.704	1.00	32.42	C
ATOM	631	O	SER	A	94	11.743	26.286	42.350	1.00	32.48	O
ATOM	632	CB	SER	A	94	10.464	23.566	42.914	1.00	32.38	C
ATOM	633	OG	SER	A	94	9.062	23.691	43.052	1.00	33.53	O
ATOM	634	N	ALA	A	95	9.902	26.314	41.070	1.00	32.58	N
ATOM	635	CA	ALA	A	95	9.766	27.757	41.135	1.00	32.90	C
ATOM	636	C	ALA	A	95	8.312	28.172	41.076	1.00	33.48	C
ATOM	637	O	ALA	A	95	7.446	27.429	40.620	1.00	33.62	O
ATOM	638	CB	ALA	A	95	10.528	28.413	39.996	1.00	32.80	C
ATOM	639	N	SER	A	96	8.053	29.382	41.539	1.00	34.08	N
ATOM	640	CA	SER	A	96	6.721	29.932	41.482	1.00	34.75	C
ATOM	641	C	SER	A	96	6.616	30.974	40.382	1.00	34.55	C
ATOM	642	O	SER	A	96	5.603	31.659	40.275	1.00	35.29	O
ATOM	643	CB	SER	A	96	6.363	30.592	42.801	1.00	35.05	C
ATOM	644	OG	SER	A	96	5.165	31.311	42.627	1.00	36.18	O
ATOM	645	N	THR	A	97	7.673	31.107	39.593	1.00	33.88	N
ATOM	646	CA	THR	A	97	7.716	32.046	38.477	1.00	33.41	C
ATOM	647	C	THR	A	97	8.084	31.238	37.265	1.00	32.32	C
ATOM	648	O	THR	A	97	8.590	30.143	37.411	1.00	32.10	O
ATOM	649	CB	THR	A	97	8.797	33.144	38.695	1.00	33.64	C
ATOM	650	OG1	THR	A	97	9.067	33.810	37.460	1.00	33.76	O
ATOM	651	CG2	THR	A	97	10.190	32.559	39.058	1.00	34.25	C
ATOM	652	N	HIS	A	98	7.840	31.762	36.073	1.00	31.47	N
ATOM	653	CA	HIS	A	98	8.278	31.071	34.863	1.00	30.97	C
ATOM	654	C	HIS	A	98	9.804	31.134	34.707	1.00	30.53	C
ATOM	655	O	HIS	A	98	10.378	30.379	33.940	1.00	29.14	O
ATOM	656	CB	HIS	A	98	7.613	31.666	33.621	1.00	31.14	C
ATOM	657	CG	HIS	A	98	7.878	33.125	33.415	1.00	30.86	C
ATOM	658	ND1	HIS	A	98	7.121	34.112	34.011	1.00	31.51	N
ATOM	659	CD2	HIS	A	98	8.795	33.767	32.651	1.00	31.48	C
ATOM	660	CE1	HIS	A	98	7.566	35.298	33.634	1.00	31.14	C
ATOM	661	NE2	HIS	A	98	8.581	35.118	32.805	1.00	30.50	N

ATOM	662	N	LYS	A	99	10.459	32.025	35.449	1.00	30.36	N
ATOM	663	CA	LYS	A	99	11.895	32.198	35.298	1.00	31.07	C
ATOM	664	C	LYS	A	99	12.761	31.288	36.166	1.00	31.00	C
ATOM	665	O	LYS	A	99	12.693	31.337	37.396	1.00	31.91	O
ATOM	666	CB	LYS	A	99	12.265	33.643	35.544	1.00	31.15	C
ATOM	667	CG	LYS	A	99	11.887	34.551	34.391	1.00	33.39	C
ATOM	668	CD	LYS	A	99	12.486	35.945	34.556	1.00	36.16	C
ATOM	669	CE	LYS	A	99	11.763	36.771	35.607	1.00	37.52	C
ATOM	670	NZ	LYS	A	99	10.620	37.507	35.006	1.00	38.84	N
ATOM	671	N	PHE	A	100	13.572	30.453	35.518	1.00	30.20	N
ATOM	672	CA	PHE	A	100	14.517	29.606	36.232	1.00	30.03	C
ATOM	673	C	PHE	A	100	15.952	30.123	36.138	1.00	29.72	C
ATOM	674	O	PHE	A	100	16.826	29.544	35.481	1.00	29.39	O
ATOM	675	CB	PHE	A	100	14.441	28.168	35.744	1.00	29.93	C
ATOM	676	CG	PHE	A	100	13.223	27.452	36.206	1.00	29.72	C
ATOM	677	CD1	PHE	A	100	12.014	27.637	35.566	1.00	28.98	C
ATOM	678	CD2	PHE	A	100	13.283	26.596	37.289	1.00	30.77	C
ATOM	679	CE1	PHE	A	100	10.896	26.969	35.983	1.00	30.22	C
ATOM	680	CE2	PHE	A	100	12.158	25.919	37.719	1.00	30.51	C
ATOM	681	CZ	PHE	A	100	10.967	26.105	37.069	1.00	30.63	C
ATOM	682	N	LEU	A	101	16.178	31.235	36.809	1.00	29.87	N
ATOM	683	CA	LEU	A	101	17.495	31.812	36.919	1.00	29.57	C
ATOM	684	C	LEU	A	101	18.451	30.814	37.555	1.00	29.61	C
ATOM	685	O	LEU	A	101	18.249	30.380	38.679	1.00	28.35	O
ATOM	686	CB	LEU	A	101	17.412	33.057	37.787	1.00	29.68	C
ATOM	687	CG	LEU	A	101	18.707	33.845	37.954	1.00	29.68	C
ATOM	688	CD1	LEU	A	101	19.184	34.337	36.620	1.00	28.70	C
ATOM	689	CD2	LEU	A	101	18.474	35.014	38.909	1.00	31.41	C
ATOM	690	N	TYR	A	102	19.490	30.440	36.816	1.00	30.36	N
ATOM	691	CA	TYR	A	102	20.516	29.535	37.338	1.00	30.64	C
ATOM	692	C	TYR	A	102	21.332	30.228	38.440	1.00	30.93	C
ATOM	693	O	TYR	A	102	21.623	31.425	38.339	1.00	30.67	O
ATOM	694	CB	TYR	A	102	21.480	29.101	36.224	1.00	30.45	C
ATOM	695	CG	TYR	A	102	22.609	28.271	36.774	1.00	31.25	C
ATOM	696	CD1	TYR	A	102	22.430	26.916	37.062	1.00	31.33	C
ATOM	697	CD2	TYR	A	102	23.842	28.844	37.054	1.00	31.29	C
ATOM	698	CE1	TYR	A	102	23.456	26.163	37.612	1.00	32.81	C
ATOM	699	CE2	TYR	A	102	24.869	28.098	37.601	1.00	32.24	C
ATOM	700	CZ	TYR	A	102	24.676	26.764	37.876	1.00	34.18	C
ATOM	701	OH	TYR	A	102	25.720	26.030	38.418	1.00	39.06	O
ATOM	702	N	TYR	A	103	21.684	29.478	39.488	1.00	31.28	N
ATOM	703	CA	TYR	A	103	22.569	29.983	40.539	1.00	31.56	C
ATOM	704	C	TYR	A	103	23.524	28.911	41.058	1.00	31.11	C
ATOM	705	O	TYR	A	103	23.190	27.732	41.165	1.00	30.75	O
ATOM	706	CB	TYR	A	103	21.796	30.599	41.706	1.00	31.98	C
ATOM	707	CG	TYR	A	103	20.846	29.663	42.385	1.00	33.92	C
ATOM	708	CD1	TYR	A	103	19.577	29.445	41.868	1.00	36.08	C
ATOM	709	CD2	TYR	A	103	21.203	29.010	43.553	1.00	36.91	C
ATOM	710	CE1	TYR	A	103	18.696	28.587	42.483	1.00	37.42	C
ATOM	711	CE2	TYR	A	103	20.325	28.153	44.189	1.00	37.63	C
ATOM	712	CZ	TYR	A	103	19.070	27.947	43.647	1.00	38.74	C
ATOM	713	OH	TYR	A	103	18.183	27.099	44.264	1.00	40.90	O
ATOM	714	N	ASP	A	104	24.725	29.345	41.391	1.00	30.34	N
ATOM	715	CA	ASP	A	104	25.752	28.444	41.873	1.00	30.04	C
ATOM	716	C	ASP	A	104	25.735	28.408	43.394	1.00	29.73	C
ATOM	717	O	ASP	A	104	26.079	29.388	44.062	1.00	28.53	O
ATOM	718	CB	ASP	A	104	27.089	28.931	41.350	1.00	30.07	C
ATOM	719	CG	ASP	A	104	28.233	28.037	41.731	1.00	30.02	C
ATOM	720	OD1	ASP	A	104	28.069	27.137	42.605	1.00	28.92	O
ATOM	721	OD2	ASP	A	104	29.339	28.183	41.168	1.00	29.24	O
ATOM	722	N	GLU	A	105	25.327	27.263	43.931	1.00	29.74	N

ATOM	723	CA	GLU	A	105	25.169	27.095	45.371	1.00	29.91	C
ATOM	724	C	GLU	A	105	26.461	27.343	46.155	1.00	29.29	C
ATOM	725	O	GLU	A	105	26.412	27.872	47.263	1.00	28.37	O
ATOM	726	CB	GLU	A	105	24.601	25.699	45.672	1.00	30.40	C
ATOM	727	CG	GLU	A	105	23.097	25.621	45.410	1.00	32.58	C
ATOM	728	CD	GLU	A	105	22.546	24.210	45.287	1.00	34.72	C
ATOM	729	OE1	GLU	A	105	22.945	23.320	46.072	1.00	35.38	O
ATOM	730	OE2	GLU	A	105	21.683	24.001	44.402	1.00	35.93	O
ATOM	731	N	LYS	A	106	27.607	27.000	45.565	1.00	29.02	N
ATOM	732	CA	LYS	A	106	28.897	27.156	46.243	1.00	29.26	C
ATOM	733	C	LYS	A	106	29.245	28.608	46.493	1.00	29.31	C
ATOM	734	O	LYS	A	106	30.051	28.903	47.363	1.00	28.83	O
ATOM	735	CB	LYS	A	106	30.036	26.530	45.433	1.00	29.60	C
ATOM	736	CG	LYS	A	106	29.864	25.036	45.094	1.00	30.18	C
ATOM	737	N	LYS	A	107	28.646	29.516	45.724	1.00	29.27	N
ATOM	738	CA	LYS	A	107	28.925	30.933	45.876	1.00	29.61	C
ATOM	739	C	LYS	A	107	27.933	31.605	46.820	1.00	30.29	C
ATOM	740	O	LYS	A	107	28.062	32.785	47.100	1.00	30.16	O
ATOM	741	CB	LYS	A	107	28.924	31.636	44.504	1.00	29.35	C
ATOM	742	CG	LYS	A	107	30.222	31.411	43.697	1.00	28.97	C
ATOM	743	CD	LYS	A	107	30.142	31.864	42.230	1.00	26.18	C
ATOM	744	CE	LYS	A	107	31.459	31.534	41.498	1.00	26.51	C
ATOM	745	NZ	LYS	A	107	31.578	32.052	40.083	1.00	24.21	N
ATOM	746	N	MET	A	108	26.950	30.869	47.320	1.00	31.39	N
ATOM	747	CA	MET	A	108	25.939	31.482	48.186	1.00	32.74	C
ATOM	748	C	MET	A	108	26.468	32.050	49.514	1.00	33.50	C
ATOM	749	O	MET	A	108	25.987	33.082	49.988	1.00	33.27	O
ATOM	750	CB	MET	A	108	24.787	30.509	48.417	1.00	33.11	C
ATOM	751	CG	MET	A	108	23.976	30.300	47.127	1.00	34.43	C
ATOM	752	SD	MET	A	108	22.458	29.330	47.263	1.00	37.47	S
ATOM	753	CE	MET	A	108	21.487	30.326	48.417	1.00	37.24	C
ATOM	754	N	ALA	A	109	27.484	31.427	50.090	1.00	34.73	N
ATOM	755	CA	ALA	A	109	28.039	31.922	51.359	1.00	36.13	C
ATOM	756	C	ALA	A	109	28.555	33.361	51.266	1.00	37.12	C
ATOM	757	O	ALA	A	109	28.455	34.127	52.213	1.00	37.35	O
ATOM	758	CB	ALA	A	109	29.147	30.991	51.860	1.00	35.96	C
ATOM	759	N	ASN	A	110	29.076	33.745	50.112	1.00	38.70	N
ATOM	760	CA	ASN	A	110	29.631	35.090	49.949	1.00	39.61	C
ATOM	761	C	ASN	A	110	28.605	36.188	49.621	1.00	39.61	C
ATOM	762	O	ASN	A	110	28.950	37.359	49.500	1.00	39.50	O
ATOM	763	CB	ASN	A	110	30.730	35.036	48.888	1.00	39.94	C
ATOM	764	CG	ASN	A	110	31.916	34.186	49.329	1.00	41.54	C
ATOM	765	OD1	ASN	A	110	32.341	34.223	50.503	1.00	41.36	O
ATOM	766	ND2	ASN	A	110	32.451	33.406	48.399	1.00	43.06	N
ATOM	767	N	PHE	A	111	27.349	35.802	49.465	1.00	40.12	N
ATOM	768	CA	PHE	A	111	26.278	36.753	49.208	1.00	40.43	C
ATOM	769	C	PHE	A	111	25.064	36.292	50.016	1.00	41.38	C
ATOM	770	O	PHE	A	111	24.068	35.811	49.471	1.00	40.89	O
ATOM	771	CB	PHE	A	111	25.954	36.839	47.710	1.00	40.30	C
ATOM	772	CG	PHE	A	111	26.973	37.597	46.910	1.00	38.60	C
ATOM	773	CD1	PHE	A	111	28.199	37.033	46.618	1.00	37.50	C
ATOM	774	CD2	PHE	A	111	26.705	38.867	46.445	1.00	38.02	C
ATOM	775	CE1	PHE	A	111	29.140	37.725	45.890	1.00	36.74	C
ATOM	776	CE2	PHE	A	111	27.649	39.560	45.705	1.00	36.60	C
ATOM	777	CZ	PHE	A	111	28.863	38.986	45.433	1.00	35.45	C
ATOM	778	N	GLN	A	112	25.175	36.457	51.329	1.00	42.72	N
ATOM	779	CA	GLN	A	112	24.154	36.022	52.276	1.00	43.86	C
ATOM	780	C	GLN	A	112	22.790	36.598	51.948	1.00	44.00	C
ATOM	781	O	GLN	A	112	21.774	35.994	52.280	1.00	44.39	O
ATOM	782	CB	GLN	A	112	24.535	36.428	53.706	1.00	44.29	C
ATOM	783	CG	GLN	A	112	25.923	35.985	54.166	1.00	46.45	C

ATOM	784	CD	GLN A 112	26.050	34.477	54.296	1.00	49.14	C
ATOM	785	OE1	GLN A 112	25.523	33.733	53.466	1.00	50.83	O
ATOM	786	NE2	GLN A 112	26.756	34.022	55.332	1.00	50.52	N
ATOM	787	N	ASN A 113	22.765	37.759	51.299	1.00	43.96	N
ATOM	788	CA	ASN A 113	21.504	38.416	50.971	1.00	44.15	C
ATOM	789	C	ASN A 113	20.827	37.921	49.679	1.00	44.12	C
ATOM	790	O	ASN A 113	19.768	38.431	49.309	1.00	44.11	O
ATOM	791	CB	ASN A 113	21.696	39.941	50.918	1.00	44.21	C
ATOM	792	CG	ASN A 113	22.084	40.541	52.283	1.00	44.80	C
ATOM	793	OD1	ASN A 113	21.759	39.991	53.349	1.00	43.65	O
ATOM	794	ND2	ASN A 113	22.778	41.675	52.246	1.00	44.92	N
ATOM	795	N	PHE A 114	21.415	36.939	48.995	1.00	43.98	N
ATOM	796	CA	PHE A 114	20.793	36.411	47.787	1.00	43.71	C
ATOM	797	C	PHE A 114	19.778	35.345	48.150	1.00	43.76	C
ATOM	798	O	PHE A 114	20.111	34.362	48.815	1.00	43.32	O
ATOM	799	CB	PHE A 114	21.813	35.808	46.833	1.00	43.82	C
ATOM	800	CG	PHE A 114	21.184	35.128	45.650	1.00	43.80	C
ATOM	801	CD1	PHE A 114	20.567	35.881	44.661	1.00	43.54	C
ATOM	802	CD2	PHE A 114	21.170	33.745	45.541	1.00	43.65	C
ATOM	803	CE1	PHE A 114	19.963	35.276	43.587	1.00	43.55	C
ATOM	804	CE2	PHE A 114	20.566	33.129	44.451	1.00	43.21	C
ATOM	805	CZ	PHE A 114	19.961	33.897	43.476	1.00	42.89	C
ATOM	806	N	LYS A 115	18.543	35.543	47.705	1.00	43.96	N
ATOM	807	CA	LYS A 115	17.459	34.613	47.999	1.00	44.38	C
ATOM	808	C	LYS A 115	16.933	34.026	46.693	1.00	44.04	C
ATOM	809	O	LYS A 115	16.213	34.687	45.945	1.00	43.97	O
ATOM	810	CB	LYS A 115	16.342	35.329	48.761	1.00	44.79	C
ATOM	811	CG	LYS A 115	16.763	35.866	50.129	1.00	46.74	C
ATOM	812	CD	LYS A 115	17.021	34.744	51.130	1.00	48.83	C
ATOM	813	CE	LYS A 115	17.461	35.288	52.484	1.00	50.18	C
ATOM	814	NZ	LYS A 115	17.498	34.224	53.539	1.00	51.05	N
ATOM	815	N	PRO A 116	17.270	32.771	46.433	1.00	43.65	N
ATOM	816	CA	PRO A 116	16.918	32.133	45.160	1.00	43.43	C
ATOM	817	C	PRO A 116	15.415	32.034	44.969	1.00	42.76	C
ATOM	818	O	PRO A 116	14.711	31.724	45.915	1.00	42.78	O
ATOM	819	CB	PRO A 116	17.525	30.732	45.273	1.00	43.57	C
ATOM	820	CG	PRO A 116	18.385	30.743	46.496	1.00	43.88	C
ATOM	821	CD	PRO A 116	17.948	31.855	47.359	1.00	43.68	C
ATOM	822	N	ARG A 117	14.940	32.306	43.761	1.00	42.20	N
ATOM	823	CA	ARG A 117	13.518	32.214	43.451	1.00	41.56	C
ATOM	824	C	ARG A 117	13.140	30.780	43.104	1.00	41.00	C
ATOM	825	O	ARG A 117	11.957	30.461	43.007	1.00	41.15	O
ATOM	826	CB	ARG A 117	13.164	33.132	42.311	1.00	41.47	C
ATOM	827	N	SER A 118	14.139	29.925	42.904	1.00	40.00	N
ATOM	828	CA	SER A 118	13.882	28.517	42.654	1.00	39.60	C
ATOM	829	C	SER A 118	14.700	27.655	43.621	1.00	39.30	C
ATOM	830	O	SER A 118	15.756	28.078	44.087	1.00	39.24	O
ATOM	831	CB	SER A 118	14.184	28.158	41.196	1.00	39.30	C
ATOM	832	OG	SER A 118	15.560	28.228	40.942	1.00	38.53	O
ATOM	833	N	ASN A 119	14.180	26.471	43.943	1.00	38.96	N
ATOM	834	CA	ASN A 119	14.838	25.537	44.854	1.00	38.95	C
ATOM	835	C	ASN A 119	15.115	24.215	44.160	1.00	37.99	C
ATOM	836	O	ASN A 119	14.314	23.751	43.359	1.00	37.35	O
ATOM	837	CB	ASN A 119	13.958	25.220	46.068	1.00	39.54	C
ATOM	838	CG	ASN A 119	13.466	26.456	46.797	1.00	41.82	C
ATOM	839	OD1	ASN A 119	14.255	27.279	47.289	1.00	44.50	O
ATOM	840	ND2	ASN A 119	12.145	26.574	46.906	1.00	44.99	N
ATOM	841	N	ARG A 120	16.243	23.607	44.492	1.00	37.46	N
ATOM	842	CA	ARG A 120	16.627	22.325	43.927	1.00	37.15	C
ATOM	843	C	ARG A 120	16.209	21.193	44.844	1.00	37.03	C
ATOM	844	O	ARG A 120	16.359	21.272	46.069	1.00	37.28	O

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ATOM    845  CB  ARG A 120      18.144  22.264  43.730  1.00 37.07           C
ATOM    846  CG  ARG A 120      18.632  21.020  42.993  1.00 36.32           C
ATOM    847  CD  ARG A 120      20.152  20.886  42.938  1.00 35.46           C
ATOM    848  NE  ARG A 120      20.777  21.277  44.198  1.00 34.29           N
ATOM    849  CZ  ARG A 120      21.049  20.445  45.202  1.00 36.66           C
ATOM    850  NH1 ARG A 120      20.753  19.147  45.122  1.00 35.60           N
ATOM    851  NH2 ARG A 120      21.614  20.915  46.305  1.00 37.13           N
ATOM    852  N   GLU A 121      15.665  20.141  44.250  1.00 36.76           N
ATOM    853  CA  GLU A 121      15.326  18.944  44.993  1.00 36.29           C
ATOM    854  C   GLU A 121      15.810  17.746  44.187  1.00 35.35           C
ATOM    855  O   GLU A 121      15.709  17.726  42.953  1.00 35.38           O
ATOM    856  CB  GLU A 121      13.820  18.863  45.262  1.00 36.78           C
ATOM    857  CG  GLU A 121      13.398  17.585  45.971  1.00 39.29           C
ATOM    858  CD  GLU A 121      12.126  17.732  46.795  1.00 42.09           C
ATOM    859  OE1 GLU A 121      12.200  18.310  47.904  1.00 45.56           O
ATOM    860  OE2 GLU A 121      11.059  17.254  46.350  1.00 43.04           O
ATOM    861  N   GLU A 122      16.366  16.764  44.886  1.00 34.04           N
ATOM    862  CA  GLU A 122      16.840  15.547  44.266  1.00 33.04           C
ATOM    863  C   GLU A 122      15.748  14.518  44.415  1.00 32.55           C
ATOM    864  O   GLU A 122      15.253  14.306  45.511  1.00 32.52           O
ATOM    865  CB  GLU A 122      18.103  15.052  44.961  1.00 32.71           C
ATOM    866  CG  GLU A 122      19.265  16.018  44.885  1.00 31.86           C
ATOM    867  CD  GLU A 122      19.705  16.296  43.454  1.00 31.04           C
ATOM    868  OE1 GLU A 122      20.065  15.331  42.757  1.00 29.68           O
ATOM    869  OE2 GLU A 122      19.694  17.479  43.025  1.00 29.20           O
ATOM    870  N   MET A 123      15.349  13.885  43.321  1.00 31.83           N
ATOM    871  CA  MET A 123      14.329  12.858  43.415  1.00 31.40           C
ATOM    872  C   MET A 123      14.532  11.820  42.343  1.00 30.68           C
ATOM    873  O   MET A 123      15.380  11.982  41.457  1.00 30.07           O
ATOM    874  CB  MET A 123      12.931  13.466  43.309  1.00 31.52           C
ATOM    875  CG  MET A 123      12.667  14.205  42.032  1.00 32.93           C
ATOM    876  SD  MET A 123      11.115  15.145  42.034  1.00 35.27           S
ATOM    877  CE  MET A 123      11.554  16.565  42.966  1.00 35.33           C
ATOM    878  N   LYS A 124      13.766  10.738  42.464  1.00 29.85           N
ATOM    879  CA  LYS A 124      13.752   9.671  41.483  1.00 29.22           C
ATOM    880  C   LYS A 124      12.891  10.140  40.307  1.00 28.45           C
ATOM    881  O   LYS A 124      12.066  11.039  40.466  1.00 27.39           O
ATOM    882  CB  LYS A 124      13.183   8.389  42.100  1.00 29.57           C
ATOM    883  CG  LYS A 124      13.954   7.857  43.321  1.00 29.88           C
ATOM    884  CD  LYS A 124      15.392   7.501  42.950  1.00 30.48           C
ATOM    885  CE  LYS A 124      16.231   7.129  44.167  1.00 30.33           C
ATOM    886  NZ  LYS A 124      17.691   7.276  43.872  1.00 30.47           N
ATOM    887  N   PHE A 125      13.075   9.536  39.133  1.00 27.71           N
ATOM    888  CA  PHE A 125      12.364  10.000  37.949  1.00 27.22           C
ATOM    889  C   PHE A 125      10.869   9.891  38.114  1.00 27.29           C
ATOM    890  O   PHE A 125      10.138  10.825  37.801  1.00 26.75           O
ATOM    891  CB  PHE A 125      12.794   9.270  36.681  1.00 26.90           C
ATOM    892  CG  PHE A 125      12.494  10.051  35.433  1.00 27.63           C
ATOM    893  CD1 PHE A 125      13.330  11.083  35.032  1.00 27.70           C
ATOM    894  CD2 PHE A 125      11.351   9.802  34.702  1.00 28.29           C
ATOM    895  CE1 PHE A 125      13.059  11.828  33.905  1.00 27.96           C
ATOM    896  CE2 PHE A 125      11.065  10.540  33.563  1.00 29.16           C
ATOM    897  CZ  PHE A 125      11.924  11.568  33.167  1.00 28.71           C
ATOM    898  N   HIS A 126      10.426   8.743  38.620  1.00 27.46           N
ATOM    899  CA  HIS A 126       9.013   8.499  38.832  1.00 27.77           C
ATOM    900  C   HIS A 126       8.430   9.522  39.794  1.00 27.71           C
ATOM    901  O   HIS A 126       7.245   9.821  39.731  1.00 27.27           O
ATOM    902  CB  HIS A 126       8.770   7.056  39.329  1.00 27.96           C
ATOM    903  CG  HIS A 126       8.897   6.880  40.812  1.00 28.47           C
ATOM    904  ND1 HIS A 126       7.831   7.026  41.672  1.00 29.29           N
ATOM    905  CD2 HIS A 126       9.961   6.552  41.585  1.00 29.43           C
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ATOM	906	CE1	HIS A 126	8.236	6.812	42.912	1.00	30.26	C
ATOM	907	NE2	HIS A 126	9.525	6.524	42.887	1.00	29.64	N
ATOM	908	N	GLU A 127	9.262	10.059	40.679	1.00	28.09	N
ATOM	909	CA	GLU A 127	8.803	11.078	41.615	1.00	28.68	C
ATOM	910	C	GLU A 127	8.585	12.400	40.865	1.00	28.99	C
ATOM	911	O	GLU A 127	7.626	13.129	41.123	1.00	29.15	O
ATOM	912	CB	GLU A 127	9.795	11.233	42.775	1.00	28.52	C
ATOM	913	CG	GLU A 127	9.931	9.968	43.626	1.00	29.84	C
ATOM	914	CD	GLU A 127	10.873	10.121	44.810	1.00	30.26	C
ATOM	915	OE1	GLU A 127	12.069	10.398	44.603	1.00	29.68	O
ATOM	916	OE2	GLU A 127	10.410	9.943	45.962	1.00	32.95	O
ATOM	917	N	PHE A 128	9.471	12.696	39.927	1.00	29.39	N
ATOM	918	CA	PHE A 128	9.354	13.914	39.119	1.00	29.64	C
ATOM	919	C	PHE A 128	8.047	13.859	38.333	1.00	30.31	C
ATOM	920	O	PHE A 128	7.274	14.817	38.294	1.00	29.97	O
ATOM	921	CB	PHE A 128	10.551	14.017	38.167	1.00	29.10	C
ATOM	922	CG	PHE A 128	10.337	14.950	36.991	1.00	28.33	C
ATOM	923	CD1	PHE A 128	10.106	16.301	37.188	1.00	26.53	C
ATOM	924	CD2	PHE A 128	10.397	14.475	35.696	1.00	26.99	C
ATOM	925	CE1	PHE A 128	9.920	17.149	36.120	1.00	27.50	C
ATOM	926	CE2	PHE A 128	10.217	15.341	34.610	1.00	28.49	C
ATOM	927	CZ	PHE A 128	9.976	16.668	34.823	1.00	26.78	C
ATOM	928	N	VAL A 129	7.797	12.705	37.736	1.00	31.32	N
ATOM	929	CA	VAL A 129	6.603	12.499	36.930	1.00	32.38	C
ATOM	930	C	VAL A 129	5.338	12.658	37.775	1.00	32.96	C
ATOM	931	O	VAL A 129	4.398	13.362	37.388	1.00	32.79	O
ATOM	932	CB	VAL A 129	6.606	11.094	36.313	1.00	32.48	C
ATOM	933	CG1	VAL A 129	5.313	10.840	35.551	1.00	32.96	C
ATOM	934	CG2	VAL A 129	7.828	10.901	35.417	1.00	31.98	C
ATOM	935	N	GLU A 130	5.329	11.993	38.925	1.00	33.61	N
ATOM	936	CA	GLU A 130	4.205	12.067	39.853	1.00	34.29	C
ATOM	937	C	GLU A 130	3.963	13.515	40.246	1.00	34.51	C
ATOM	938	O	GLU A 130	2.832	13.986	40.220	1.00	33.80	O
ATOM	939	CB	GLU A 130	4.481	11.206	41.087	1.00	34.35	C
ATOM	940	CG	GLU A 130	4.372	9.711	40.815	1.00	34.92	C
ATOM	941	CD	GLU A 130	5.204	8.858	41.761	1.00	35.66	C
ATOM	942	OE1	GLU A 130	5.595	9.345	42.845	1.00	36.55	O
ATOM	943	OE2	GLU A 130	5.477	7.692	41.407	1.00	36.06	O
ATOM	944	N	LYS A 131	5.033	14.223	40.587	1.00	35.27	N
ATOM	945	CA	LYS A 131	4.912	15.632	40.920	1.00	36.15	C
ATOM	946	C	LYS A 131	4.286	16.408	39.758	1.00	36.63	C
ATOM	947	O	LYS A 131	3.420	17.253	39.972	1.00	36.42	O
ATOM	948	CB	LYS A 131	6.269	16.240	41.261	1.00	36.51	C
ATOM	949	CG	LYS A 131	6.467	16.623	42.712	1.00	37.67	C
ATOM	950	CD	LYS A 131	7.125	18.001	42.822	1.00	38.95	C
ATOM	951	CE	LYS A 131	7.581	18.324	44.252	1.00	40.39	C
ATOM	952	NZ	LYS A 131	8.073	19.747	44.404	1.00	40.82	N
ATOM	953	N	LEU A 132	4.725	16.142	38.532	1.00	37.30	N
ATOM	954	CA	LEU A 132	4.156	16.845	37.383	1.00	38.29	C
ATOM	955	C	LEU A 132	2.669	16.557	37.280	1.00	38.83	C
ATOM	956	O	LEU A 132	1.875	17.449	36.976	1.00	38.56	O
ATOM	957	CB	LEU A 132	4.819	16.424	36.081	1.00	38.42	C
ATOM	958	CG	LEU A 132	6.224	16.916	35.791	1.00	39.15	C
ATOM	959	CD1	LEU A 132	6.671	16.296	34.485	1.00	39.76	C
ATOM	960	CD2	LEU A 132	6.281	18.433	35.712	1.00	39.81	C
ATOM	961	N	GLN A 133	2.311	15.300	37.529	1.00	39.68	N
ATOM	962	CA	GLN A 133	0.920	14.863	37.495	1.00	40.45	C
ATOM	963	C	GLN A 133	0.057	15.580	38.541	1.00	41.05	C
ATOM	964	O	GLN A 133	-1.035	16.040	38.222	1.00	41.20	O
ATOM	965	CB	GLN A 133	0.835	13.344	37.681	1.00	40.31	C
ATOM	966	N	ASP A 134	0.542	15.682	39.777	1.00	41.89	N

ATOM	967	CA	ASP	A	134	-0.232	16.313	40.854	1.00	42.72	C
ATOM	968	C	ASP	A	134	-0.506	17.792	40.576	1.00	42.60	C
ATOM	969	O	ASP	A	134	-1.570	18.316	40.900	1.00	42.25	O
ATOM	970	CB	ASP	A	134	0.491	16.169	42.200	1.00	43.21	C
ATOM	971	CG	ASP	A	134	-0.429	16.419	43.396	1.00	45.71	C
ATOM	972	OD1	ASP	A	134	-1.566	16.916	43.213	1.00	48.39	O
ATOM	973	OD2	ASP	A	134	-0.104	16.131	44.571	1.00	49.60	O
ATOM	974	N	ILE	A	135	0.467	18.467	39.981	1.00	42.77	N
ATOM	975	CA	ILE	A	135	0.306	19.872	39.660	1.00	42.91	C
ATOM	976	C	ILE	A	135	-0.793	20.050	38.626	1.00	43.15	C
ATOM	977	O	ILE	A	135	-1.690	20.871	38.800	1.00	43.03	O
ATOM	978	CB	ILE	A	135	1.623	20.443	39.155	1.00	42.94	C
ATOM	979	CG1	ILE	A	135	2.586	20.607	40.330	1.00	43.10	C
ATOM	980	CG2	ILE	A	135	1.396	21.778	38.473	1.00	42.80	C
ATOM	981	CD1	ILE	A	135	4.040	20.621	39.934	1.00	43.49	C
ATOM	982	N	GLN	A	136	-0.716	19.272	37.554	1.00	43.64	N
ATOM	983	CA	GLN	A	136	-1.712	19.321	36.496	1.00	44.17	C
ATOM	984	C	GLN	A	136	-3.103	19.129	37.081	1.00	44.65	C
ATOM	985	O	GLN	A	136	-3.976	19.984	36.936	1.00	44.71	O
ATOM	986	CB	GLN	A	136	-1.431	18.240	35.466	1.00	44.19	C
ATOM	987	N	GLN	A	137	-3.289	18.014	37.776	1.00	45.23	N
ATOM	988	CA	GLN	A	137	-4.596	17.654	38.314	1.00	45.66	C
ATOM	989	C	GLN	A	137	-5.146	18.696	39.277	1.00	45.88	C
ATOM	990	O	GLN	A	137	-6.337	19.005	39.238	1.00	46.33	O
ATOM	991	CB	GLN	A	137	-4.535	16.277	38.991	1.00	45.74	C
ATOM	992	N	ARG	A	138	-4.288	19.246	40.131	1.00	45.93	N
ATOM	993	CA	ARG	A	138	-4.740	20.211	41.132	1.00	45.84	C
ATOM	994	C	ARG	A	138	-4.720	21.640	40.592	1.00	45.53	C
ATOM	995	O	ARG	A	138	-4.911	22.598	41.344	1.00	45.72	O
ATOM	996	CB	ARG	A	138	-3.880	20.108	42.398	1.00	45.92	C
ATOM	997	CG	ARG	A	138	-2.551	20.866	42.340	1.00	46.84	C
ATOM	998	CD	ARG	A	138	-1.589	20.458	43.437	1.00	47.70	C
ATOM	999	NE	ARG	A	138	-0.509	21.418	43.652	1.00	47.78	N
ATOM	1000	CZ	ARG	A	138	0.788	21.125	43.578	1.00	49.17	C
ATOM	1001	NH1	ARG	A	138	1.186	19.897	43.274	1.00	50.12	N
ATOM	1002	NH2	ARG	A	138	1.702	22.064	43.798	1.00	49.52	N
ATOM	1003	N	GLY	A	139	-4.492	21.783	39.290	1.00	44.99	N
ATOM	1004	CA	GLY	A	139	-4.419	23.094	38.669	1.00	44.52	C
ATOM	1005	C	GLY	A	139	-3.412	24.041	39.310	1.00	44.06	C
ATOM	1006	O	GLY	A	139	-3.551	25.259	39.203	1.00	44.28	O
ATOM	1007	N	GLY	A	140	-2.382	23.495	39.953	1.00	43.28	N
ATOM	1008	CA	GLY	A	140	-1.388	24.309	40.629	1.00	42.49	C
ATOM	1009	C	GLY	A	140	-0.609	25.218	39.694	1.00	41.92	C
ATOM	1010	O	GLY	A	140	-0.556	24.989	38.480	1.00	41.85	O
ATOM	1011	N	GLU	A	141	-0.004	26.264	40.250	1.00	40.90	N
ATOM	1012	CA	GLU	A	141	0.789	27.186	39.444	1.00	40.07	C
ATOM	1013	C	GLU	A	141	2.286	26.884	39.549	1.00	38.68	C
ATOM	1014	O	GLU	A	141	3.096	27.503	38.867	1.00	38.67	O
ATOM	1015	CB	GLU	A	141	0.513	28.644	39.839	1.00	40.36	C
ATOM	1016	CG	GLU	A	141	-0.799	29.224	39.309	1.00	41.91	C
ATOM	1017	CD	GLU	A	141	-1.001	29.042	37.805	1.00	44.25	C
ATOM	1018	OE1	GLU	A	141	0.004	29.008	37.043	1.00	45.69	O
ATOM	1019	OE2	GLU	A	141	-2.181	28.940	37.380	1.00	44.55	O
ATOM	1020	N	GLU	A	142	2.648	25.944	40.413	1.00	37.02	N
ATOM	1021	CA	GLU	A	142	4.040	25.573	40.596	1.00	35.61	C
ATOM	1022	C	GLU	A	142	4.629	25.120	39.265	1.00	34.41	C
ATOM	1023	O	GLU	A	142	3.923	24.594	38.408	1.00	34.25	O
ATOM	1024	CB	GLU	A	142	4.150	24.443	41.627	1.00	35.49	C
ATOM	1025	CG	GLU	A	142	5.571	24.173	42.095	1.00	35.47	C
ATOM	1026	CD	GLU	A	142	5.710	22.944	42.978	1.00	36.48	C
ATOM	1027	OE1	GLU	A	142	4.733	22.174	43.142	1.00	37.45	O

ATOM	1028	OE2	GLU A 142	6.821	22.739	43.511	1.00	36.76	O
ATOM	1029	N	ARG A 143	5.926	25.323	39.096	1.00	32.91	N
ATOM	1030	CA	ARG A 143	6.596	24.893	37.884	1.00	31.95	C
ATOM	1031	C	ARG A 143	7.803	24.058	38.214	1.00	30.62	C
ATOM	1032	O	ARG A 143	8.514	24.354	39.166	1.00	30.75	O
ATOM	1033	CB	ARG A 143	7.072	26.097	37.082	1.00	32.19	C
ATOM	1034	CG	ARG A 143	5.968	26.912	36.447	1.00	32.57	C
ATOM	1035	CD	ARG A 143	6.507	28.170	35.801	1.00	32.53	C
ATOM	1036	NE	ARG A 143	5.492	28.885	35.037	1.00	32.25	N
ATOM	1037	CZ	ARG A 143	5.158	28.617	33.790	1.00	31.80	C
ATOM	1038	NH1	ARG A 143	5.757	27.637	33.105	1.00	31.28	N
ATOM	1039	NH2	ARG A 143	4.214	29.345	33.221	1.00	32.77	N
ATOM	1040	N	LEU A 144	8.054	23.028	37.417	1.00	28.97	N
ATOM	1041	CA	LEU A 144	9.235	22.219	37.617	1.00	28.09	C
ATOM	1042	C	LEU A 144	10.150	22.257	36.398	1.00	27.14	C
ATOM	1043	O	LEU A 144	9.690	22.418	35.272	1.00	26.74	O
ATOM	1044	CB	LEU A 144	8.834	20.783	37.887	1.00	28.28	C
ATOM	1045	CG	LEU A 144	7.839	20.606	39.038	1.00	28.89	C
ATOM	1046	CD1	LEU A 144	7.515	19.123	39.216	1.00	29.62	C
ATOM	1047	CD2	LEU A 144	8.364	21.212	40.333	1.00	27.84	C
ATOM	1048	N	TYR A 145	11.447	22.102	36.636	1.00	25.69	N
ATOM	1049	CA	TYR A 145	12.395	21.976	35.548	1.00	25.05	C
ATOM	1050	C	TYR A 145	13.459	20.957	35.968	1.00	25.00	C
ATOM	1051	O	TYR A 145	14.239	21.193	36.881	1.00	25.01	O
ATOM	1052	CB	TYR A 145	13.022	23.327	35.183	1.00	24.76	C
ATOM	1053	CG	TYR A 145	13.471	23.485	33.728	1.00	23.25	C
ATOM	1054	CD1	TYR A 145	13.739	22.385	32.931	1.00	21.70	C
ATOM	1055	CD2	TYR A 145	13.667	24.746	33.175	1.00	22.16	C
ATOM	1056	CE1	TYR A 145	14.154	22.526	31.620	1.00	20.98	C
ATOM	1057	CE2	TYR A 145	14.097	24.904	31.846	1.00	21.30	C
ATOM	1058	CZ	TYR A 145	14.332	23.799	31.071	1.00	20.66	C
ATOM	1059	OH	TYR A 145	14.737	23.933	29.740	1.00	18.41	O
ATOM	1060	N	LEU A 146	13.446	19.808	35.318	1.00	24.95	N
ATOM	1061	CA	LEU A 146	14.453	18.787	35.547	1.00	25.43	C
ATOM	1062	C	LEU A 146	15.678	19.100	34.694	1.00	24.91	C
ATOM	1063	O	LEU A 146	15.555	19.313	33.493	1.00	24.10	O
ATOM	1064	CB	LEU A 146	13.907	17.419	35.162	1.00	25.59	C
ATOM	1065	CG	LEU A 146	14.875	16.238	35.334	1.00	27.52	C
ATOM	1066	CD1	LEU A 146	14.111	14.966	35.672	1.00	26.95	C
ATOM	1067	CD2	LEU A 146	15.742	16.023	34.084	1.00	29.46	C
ATOM	1068	N	GLN A 147	16.845	19.097	35.330	1.00	24.91	N
ATOM	1069	CA	GLN A 147	18.115	19.394	34.685	1.00	25.27	C
ATOM	1070	C	GLN A 147	19.146	18.490	35.317	1.00	25.28	C
ATOM	1071	O	GLN A 147	19.610	18.740	36.419	1.00	27.14	O
ATOM	1072	CB	GLN A 147	18.475	20.876	34.863	1.00	25.02	C
ATOM	1073	CG	GLN A 147	17.321	21.804	34.485	1.00	24.97	C
ATOM	1074	CD	GLN A 147	17.682	23.283	34.560	1.00	27.08	C
ATOM	1075	OE1	GLN A 147	16.891	24.149	34.141	1.00	27.93	O
ATOM	1076	NE2	GLN A 147	18.860	23.575	35.064	1.00	23.50	N
ATOM	1077	N	GLN A 148	19.487	17.428	34.611	1.00	25.47	N
ATOM	1078	CA	GLN A 148	20.319	16.365	35.146	1.00	25.45	C
ATOM	1079	C	GLN A 148	21.254	15.816	34.105	1.00	25.50	C
ATOM	1080	O	GLN A 148	20.862	15.485	32.992	1.00	25.04	O
ATOM	1081	CB	GLN A 148	19.436	15.231	35.640	1.00	25.37	C
ATOM	1082	CG	GLN A 148	20.201	14.021	36.167	1.00	26.15	C
ATOM	1083	CD	GLN A 148	21.129	14.383	37.314	1.00	26.56	C
ATOM	1084	OE1	GLN A 148	20.718	15.093	38.240	1.00	23.94	O
ATOM	1085	NE2	GLN A 148	22.383	13.916	37.248	1.00	25.29	N
ATOM	1086	N	THR A 149	22.510	15.769	34.482	1.00	25.86	N
ATOM	1087	CA	THR A 149	23.552	15.219	33.667	1.00	27.04	C
ATOM	1088	C	THR A 149	23.298	13.720	33.527	1.00	27.25	C

ATOM	1089	O	THR A 149	23.012	13.044	34.508	1.00	26.86	O
ATOM	1090	CB	THR A 149	24.903	15.540	34.375	1.00	27.42	C
ATOM	1091	OG1	THR A 149	25.300	16.882	34.020	1.00	29.80	O
ATOM	1092	CG2	THR A 149	26.034	14.702	33.873	1.00	28.98	C
ATOM	1093	N	LEU A 150	23.338	13.224	32.298	1.00	27.70	N
ATOM	1094	CA	LEU A 150	23.195	11.812	32.027	1.00	28.46	C
ATOM	1095	C	LEU A 150	24.429	11.076	32.573	1.00	28.97	C
ATOM	1096	O	LEU A 150	25.548	11.468	32.268	1.00	29.00	O
ATOM	1097	CB	LEU A 150	23.084	11.580	30.524	1.00	28.34	C
ATOM	1098	CG	LEU A 150	21.780	11.981	29.837	1.00	29.63	C
ATOM	1099	CD1	LEU A 150	21.944	11.862	28.328	1.00	30.03	C
ATOM	1100	CD2	LEU A 150	20.619	11.140	30.310	1.00	31.15	C
ATOM	1101	N	ASN A 151	24.230	10.030	33.378	1.00	29.35	N
ATOM	1102	CA	ASN A 151	25.348	9.258	33.949	1.00	29.51	C
ATOM	1103	C	ASN A 151	25.137	7.732	33.934	1.00	29.92	C
ATOM	1104	O	ASN A 151	24.162	7.241	33.348	1.00	29.73	O
ATOM	1105	CB	ASN A 151	25.590	9.710	35.385	1.00	29.78	C
ATOM	1106	CG	ASN A 151	24.362	9.553	36.241	1.00	29.19	C
ATOM	1107	OD1	ASN A 151	23.735	8.497	36.260	1.00	30.09	O
ATOM	1108	ND2	ASN A 151	23.991	10.611	36.930	1.00	29.31	N
ATOM	1109	N	ASP A 152	26.020	6.999	34.627	1.00	30.27	N
ATOM	1110	CA	ASP A 152	26.034	5.514	34.649	1.00	30.85	C
ATOM	1111	C	ASP A 152	24.830	4.797	35.212	1.00	30.51	C
ATOM	1112	O	ASP A 152	24.779	3.562	35.137	1.00	30.29	O
ATOM	1113	CB	ASP A 152	27.178	4.965	35.519	1.00	31.48	C
ATOM	1114	CG	ASP A 152	28.384	5.812	35.493	1.00	34.64	C
ATOM	1115	OD1	ASP A 152	28.588	6.523	34.482	1.00	41.71	O
ATOM	1116	OD2	ASP A 152	29.177	5.857	36.437	1.00	37.31	O
ATOM	1117	N	THR A 153	23.894	5.501	35.833	1.00	30.21	N
ATOM	1118	CA	THR A 153	22.767	4.785	36.432	1.00	30.13	C
ATOM	1119	C	THR A 153	21.612	4.626	35.463	1.00	29.54	C
ATOM	1120	O	THR A 153	20.639	3.970	35.778	1.00	29.38	O
ATOM	1121	CB	THR A 153	22.277	5.481	37.704	1.00	30.37	C
ATOM	1122	OG1	THR A 153	21.735	6.770	37.373	1.00	31.06	O
ATOM	1123	CG2	THR A 153	23.452	5.763	38.658	1.00	30.56	C
ATOM	1124	N	VAL A 154	21.703	5.213	34.280	1.00	29.07	N
ATOM	1125	CA	VAL A 154	20.596	5.082	33.346	1.00	28.90	C
ATOM	1126	C	VAL A 154	20.488	3.613	32.968	1.00	28.83	C
ATOM	1127	O	VAL A 154	21.486	2.898	33.002	1.00	28.78	O
ATOM	1128	CB	VAL A 154	20.762	5.952	32.088	1.00	28.61	C
ATOM	1129	CG1	VAL A 154	20.808	7.410	32.462	1.00	29.14	C
ATOM	1130	CG2	VAL A 154	21.999	5.547	31.305	1.00	28.52	C
ATOM	1131	N	GLY A 155	19.283	3.170	32.615	1.00	28.74	N
ATOM	1132	CA	GLY A 155	19.043	1.780	32.263	1.00	28.33	C
ATOM	1133	C	GLY A 155	19.484	1.387	30.860	1.00	28.70	C
ATOM	1134	O	GLY A 155	19.862	2.235	30.031	1.00	28.27	O
ATOM	1135	N	ARG A 156	19.384	0.088	30.591	1.00	28.47	N
ATOM	1136	CA	ARG A 156	19.857	-0.519	29.349	1.00	28.54	C
ATOM	1137	C	ARG A 156	19.291	0.096	28.084	1.00	28.18	C
ATOM	1138	O	ARG A 156	20.029	0.346	27.143	1.00	28.69	O
ATOM	1139	CB	ARG A 156	19.582	-2.019	29.362	1.00	28.58	C
ATOM	1140	N	LYS A 157	17.986	0.304	28.042	1.00	27.53	N
ATOM	1141	CA	LYS A 157	17.390	0.888	26.860	1.00	27.32	C
ATOM	1142	C	LYS A 157	17.947	2.306	26.625	1.00	27.10	C
ATOM	1143	O	LYS A 157	18.213	2.672	25.490	1.00	26.76	O
ATOM	1144	CB	LYS A 157	15.858	0.902	26.960	1.00	27.68	C
ATOM	1145	CG	LYS A 157	15.171	-0.451	26.656	1.00	26.26	C
ATOM	1146	N	ILE A 158	18.138	3.086	27.688	1.00	26.68	N
ATOM	1147	CA	ILE A 158	18.665	4.450	27.543	1.00	26.67	C
ATOM	1148	C	ILE A 158	20.107	4.368	27.100	1.00	26.53	C
ATOM	1149	O	ILE A 158	20.558	5.170	26.285	1.00	25.74	O

ATOM	1150	CB	ILE A 158	18.570	5.245	28.837	1.00	26.51	C
ATOM	1151	CG1	ILE A 158	17.114	5.399	29.269	1.00	27.11	C
ATOM	1152	CG2	ILE A 158	19.208	6.618	28.667	1.00	27.55	C
ATOM	1153	CD1	ILE A 158	16.232	6.028	28.260	1.00	28.98	C
ATOM	1154	N	VAL A 159	20.817	3.378	27.629	1.00	26.46	N
ATOM	1155	CA	VAL A 159	22.187	3.125	27.226	1.00	26.70	C
ATOM	1156	C	VAL A 159	22.191	2.813	25.728	1.00	26.30	C
ATOM	1157	O	VAL A 159	23.022	3.332	24.999	1.00	25.90	O
ATOM	1158	CB	VAL A 159	22.819	1.963	28.018	1.00	27.18	C
ATOM	1159	CG1	VAL A 159	24.045	1.436	27.311	1.00	28.12	C
ATOM	1160	CG2	VAL A 159	23.180	2.410	29.427	1.00	27.44	C
ATOM	1161	N	MET A 160	21.255	1.984	25.269	1.00	26.08	N
ATOM	1162	CA	MET A 160	21.175	1.652	23.840	1.00	26.30	C
ATOM	1163	C	MET A 160	20.906	2.929	23.005	1.00	24.71	C
ATOM	1164	O	MET A 160	21.559	3.164	22.000	1.00	23.40	O
ATOM	1165	CB	MET A 160	20.081	0.617	23.565	1.00	26.71	C
ATOM	1166	CG	MET A 160	20.401	-0.790	24.070	1.00	30.23	C
ATOM	1167	SD	MET A 160	21.721	-1.628	23.154	1.00	35.73	S
ATOM	1168	CE	MET A 160	20.883	-1.823	21.524	1.00	36.68	C
ATOM	1169	N	ASP A 161	19.948	3.739	23.439	1.00	23.86	N
ATOM	1170	CA	ASP A 161	19.636	5.000	22.756	1.00	23.67	C
ATOM	1171	C	ASP A 161	20.840	5.943	22.664	1.00	22.65	C
ATOM	1172	O	ASP A 161	21.148	6.478	21.593	1.00	23.02	O
ATOM	1173	CB	ASP A 161	18.472	5.699	23.455	1.00	23.42	C
ATOM	1174	CG	ASP A 161	17.178	4.898	23.369	1.00	24.19	C
ATOM	1175	OD1	ASP A 161	17.095	3.941	22.552	1.00	19.47	O
ATOM	1176	OD2	ASP A 161	16.197	5.164	24.087	1.00	24.90	O
ATOM	1177	N	PHE A 162	21.513	6.132	23.791	1.00	21.70	N
ATOM	1178	CA	PHE A 162	22.667	7.003	23.903	1.00	21.16	C
ATOM	1179	C	PHE A 162	23.777	6.557	22.964	1.00	20.02	C
ATOM	1180	O	PHE A 162	24.393	7.362	22.310	1.00	20.22	O
ATOM	1181	CB	PHE A 162	23.144	7.010	25.364	1.00	21.38	C
ATOM	1182	CG	PHE A 162	24.286	7.936	25.650	1.00	22.82	C
ATOM	1183	CD1	PHE A 162	24.072	9.290	25.882	1.00	26.05	C
ATOM	1184	CD2	PHE A 162	25.579	7.450	25.738	1.00	24.99	C
ATOM	1185	CE1	PHE A 162	25.144	10.136	26.181	1.00	25.32	C
ATOM	1186	CE2	PHE A 162	26.654	8.301	26.026	1.00	24.73	C
ATOM	1187	CZ	PHE A 162	26.438	9.622	26.250	1.00	24.82	C
ATOM	1188	N	LEU A 163	24.029	5.271	22.894	1.00	19.74	N
ATOM	1189	CA	LEU A 163	25.064	4.767	21.998	1.00	19.88	C
ATOM	1190	C	LEU A 163	24.688	4.965	20.533	1.00	18.90	C
ATOM	1191	O	LEU A 163	25.554	5.020	19.675	1.00	18.20	O
ATOM	1192	CB	LEU A 163	25.320	3.287	22.256	1.00	19.78	C
ATOM	1193	CG	LEU A 163	26.078	3.019	23.546	1.00	20.79	C
ATOM	1194	CD1	LEU A 163	26.069	1.534	23.811	1.00	21.16	C
ATOM	1195	CD2	LEU A 163	27.498	3.567	23.456	1.00	21.66	C
ATOM	1196	N	GLY A 164	23.395	5.055	20.272	1.00	18.33	N
ATOM	1197	CA	GLY A 164	22.883	5.296	18.941	1.00	19.05	C
ATOM	1198	C	GLY A 164	22.879	6.764	18.519	1.00	19.33	C
ATOM	1199	O	GLY A 164	22.347	7.079	17.451	1.00	20.16	O
ATOM	1200	N	PHE A 165	23.424	7.651	19.350	1.00	18.45	N
ATOM	1201	CA	PHE A 165	23.516	9.048	18.974	1.00	19.26	C
ATOM	1202	C	PHE A 165	24.548	9.102	17.850	1.00	19.34	C
ATOM	1203	O	PHE A 165	25.363	8.177	17.720	1.00	18.77	O
ATOM	1204	CB	PHE A 165	23.947	9.915	20.158	1.00	19.09	C
ATOM	1205	CG	PHE A 165	22.862	10.139	21.208	1.00	20.44	C
ATOM	1206	CD1	PHE A 165	21.572	9.632	21.047	1.00	21.56	C
ATOM	1207	CD2	PHE A 165	23.143	10.878	22.357	1.00	20.27	C
ATOM	1208	CE1	PHE A 165	20.604	9.840	22.010	1.00	21.01	C
ATOM	1209	CE2	PHE A 165	22.174	11.096	23.326	1.00	20.14	C
ATOM	1210	CZ	PHE A 165	20.913	10.567	23.163	1.00	22.00	C

ATOM	1211	N	ASN	A 166	24.508	10.157	17.040	1.00	19.48	N
ATOM	1212	CA	ASN	A 166	25.428	10.290	15.897	1.00	20.08	C
ATOM	1213	C	ASN	A 166	26.827	10.792	16.305	1.00	20.53	C
ATOM	1214	O	ASN	A 166	27.193	11.975	16.076	1.00	20.34	O
ATOM	1215	CB	ASN	A 166	24.836	11.183	14.790	1.00	19.52	C
ATOM	1216	CG	ASN	A 166	25.572	11.003	13.451	1.00	19.82	C
ATOM	1217	OD1	ASN	A 166	26.652	10.376	13.412	1.00	18.39	O
ATOM	1218	ND2	ASN	A 166	24.987	11.528	12.350	1.00	15.25	N
ATOM	1219	N	TRP	A 167	27.564	9.892	16.955	1.00	20.69	N
ATOM	1220	CA	TRP	A 167	28.911	10.161	17.441	1.00	21.20	C
ATOM	1221	C	TRP	A 167	29.858	10.404	16.270	1.00	21.35	C
ATOM	1222	O	TRP	A 167	30.806	11.171	16.371	1.00	21.36	O
ATOM	1223	CB	TRP	A 167	29.402	8.977	18.316	1.00	21.31	C
ATOM	1224	CG	TRP	A 167	28.550	8.849	19.539	1.00	21.63	C
ATOM	1225	CD1	TRP	A 167	27.673	7.841	19.844	1.00	22.35	C
ATOM	1226	CD2	TRP	A 167	28.433	9.808	20.591	1.00	20.88	C
ATOM	1227	NE1	TRP	A 167	27.030	8.119	21.028	1.00	22.98	N
ATOM	1228	CE2	TRP	A 167	27.486	9.315	21.511	1.00	21.22	C
ATOM	1229	CE3	TRP	A 167	29.054	11.036	20.863	1.00	20.14	C
ATOM	1230	CZ2	TRP	A 167	27.143	9.999	22.670	1.00	22.17	C
ATOM	1231	CZ3	TRP	A 167	28.693	11.724	21.990	1.00	19.81	C
ATOM	1232	CH2	TRP	A 167	27.742	11.206	22.889	1.00	21.02	C
ATOM	1233	N	ASN	A 168	29.610	9.743	15.153	1.00	21.50	N
ATOM	1234	CA	ASN	A 168	30.464	9.927	13.991	1.00	21.77	C
ATOM	1235	C	ASN	A 168	30.488	11.406	13.605	1.00	21.48	C
ATOM	1236	O	ASN	A 168	31.549	11.992	13.428	1.00	20.55	O
ATOM	1237	CB	ASN	A 168	29.964	9.101	12.814	1.00	22.00	C
ATOM	1238	CG	ASN	A 168	30.856	9.236	11.584	1.00	23.99	C
ATOM	1239	OD1	ASN	A 168	32.052	8.974	11.661	1.00	26.79	O
ATOM	1240	ND2	ASN	A 168	30.277	9.652	10.448	1.00	24.40	N
ATOM	1241	N	TRP	A 169	29.302	11.995	13.484	1.00	21.28	N
ATOM	1242	CA	TRP	A 169	29.183	13.372	13.071	1.00	21.23	C
ATOM	1243	C	TRP	A 169	29.708	14.331	14.133	1.00	21.44	C
ATOM	1244	O	TRP	A 169	30.450	15.258	13.822	1.00	20.50	O
ATOM	1245	CB	TRP	A 169	27.736	13.741	12.740	1.00	21.29	C
ATOM	1246	CG	TRP	A 169	27.611	15.186	12.397	1.00	20.56	C
ATOM	1247	CD1	TRP	A 169	27.840	15.766	11.173	1.00	19.81	C
ATOM	1248	CD2	TRP	A 169	27.293	16.256	13.290	1.00	20.58	C
ATOM	1249	NE1	TRP	A 169	27.641	17.124	11.253	1.00	20.45	N
ATOM	1250	CE2	TRP	A 169	27.313	17.453	12.540	1.00	21.52	C
ATOM	1251	CE3	TRP	A 169	26.951	16.324	14.636	1.00	22.34	C
ATOM	1252	CZ2	TRP	A 169	27.036	18.705	13.102	1.00	24.24	C
ATOM	1253	CZ3	TRP	A 169	26.690	17.558	15.195	1.00	24.93	C
ATOM	1254	CH2	TRP	A 169	26.728	18.736	14.423	1.00	25.53	C
ATOM	1255	N	ILE	A 170	29.318	14.124	15.381	1.00	21.81	N
ATOM	1256	CA	ILE	A 170	29.742	15.056	16.412	1.00	22.51	C
ATOM	1257	C	ILE	A 170	31.245	14.894	16.755	1.00	23.07	C
ATOM	1258	O	ILE	A 170	31.917	15.872	17.067	1.00	23.88	O
ATOM	1259	CB	ILE	A 170	28.837	14.988	17.662	1.00	21.97	C
ATOM	1260	CG1	ILE	A 170	28.878	16.326	18.396	1.00	21.44	C
ATOM	1261	CG2	ILE	A 170	29.262	13.894	18.581	1.00	21.76	C
ATOM	1262	CD1	ILE	A 170	27.794	16.472	19.409	1.00	21.59	C
ATOM	1263	N	ASN	A 171	31.781	13.692	16.674	1.00	23.52	N
ATOM	1264	CA	ASN	A 171	33.209	13.516	16.934	1.00	24.55	C
ATOM	1265	C	ASN	A 171	34.021	14.254	15.874	1.00	25.23	C
ATOM	1266	O	ASN	A 171	35.067	14.828	16.171	1.00	25.14	O
ATOM	1267	CB	ASN	A 171	33.626	12.031	16.949	1.00	24.52	C
ATOM	1268	CG	ASN	A 171	33.095	11.271	18.171	1.00	24.45	C
ATOM	1269	OD1	ASN	A 171	32.625	11.855	19.154	1.00	23.01	O
ATOM	1270	ND2	ASN	A 171	33.169	9.969	18.099	1.00	22.49	N
ATOM	1271	N	LYS	A 172	33.560	14.219	14.630	1.00	25.46	N

ATOM	1272	CA	LYS A 172	34.255	14.963	13.592	1.00	26.46	C
ATOM	1273	C	LYS A 172	34.221	16.478	13.873	1.00	25.77	C
ATOM	1274	O	LYS A 172	35.224	17.169	13.681	1.00	25.85	O
ATOM	1275	CB	LYS A 172	33.705	14.634	12.205	1.00	26.90	C
ATOM	1276	CG	LYS A 172	34.262	13.351	11.668	1.00	29.88	C
ATOM	1277	CD	LYS A 172	33.752	13.033	10.240	1.00	34.20	C
ATOM	1278	CE	LYS A 172	34.458	11.810	9.690	1.00	36.15	C
ATOM	1279	NZ	LYS A 172	34.556	11.800	8.188	1.00	40.56	N
ATOM	1280	N	GLN A 173	33.088	16.986	14.338	1.00	25.37	N
ATOM	1281	CA	GLN A 173	32.981	18.400	14.690	1.00	25.52	C
ATOM	1282	C	GLN A 173	34.002	18.741	15.774	1.00	25.71	C
ATOM	1283	O	GLN A 173	34.780	19.669	15.618	1.00	26.05	O
ATOM	1284	CB	GLN A 173	31.589	18.740	15.200	1.00	25.30	C
ATOM	1285	CG	GLN A 173	30.522	18.729	14.138	1.00	25.28	C
ATOM	1286	CD	GLN A 173	30.783	19.753	13.061	1.00	26.34	C
ATOM	1287	OE1	GLN A 173	31.252	20.872	13.345	1.00	26.57	O
ATOM	1288	NE2	GLN A 173	30.492	19.386	11.822	1.00	23.68	N
ATOM	1289	N	GLN A 174	33.972	17.985	16.867	1.00	25.20	N
ATOM	1290	CA	GLN A 174	34.931	18.124	17.944	1.00	25.45	C
ATOM	1291	C	GLN A 174	36.380	18.182	17.392	1.00	25.74	C
ATOM	1292	O	GLN A 174	37.152	19.066	17.767	1.00	24.76	O
ATOM	1293	CB	GLN A 174	34.770	16.951	18.923	1.00	25.13	C
ATOM	1294	CG	GLN A 174	35.771	16.925	20.048	1.00	26.00	C
ATOM	1295	CD	GLN A 174	35.636	15.697	20.929	1.00	26.76	C
ATOM	1296	OE1	GLN A 174	35.278	14.629	20.450	1.00	28.02	O
ATOM	1297	NE2	GLN A 174	35.917	15.851	22.222	1.00	26.75	N
ATOM	1298	N	GLY A 175	36.724	17.249	16.505	1.00	25.61	N
ATOM	1299	CA	GLY A 175	38.040	17.201	15.887	1.00	26.56	C
ATOM	1300	C	GLY A 175	38.333	18.393	14.980	1.00	27.62	C
ATOM	1301	O	GLY A 175	39.371	19.051	15.111	1.00	28.21	O
ATOM	1302	N	LYS A 176	37.415	18.695	14.074	1.00	28.41	N
ATOM	1303	CA	LYS A 176	37.583	19.834	13.173	1.00	29.52	C
ATOM	1304	C	LYS A 176	37.778	21.177	13.895	1.00	29.38	C
ATOM	1305	O	LYS A 176	38.557	22.009	13.443	1.00	29.30	O
ATOM	1306	CB	LYS A 176	36.371	19.977	12.257	1.00	29.90	C
ATOM	1307	CG	LYS A 176	36.212	18.895	11.227	1.00	32.69	C
ATOM	1308	CD	LYS A 176	35.023	19.242	10.336	1.00	36.10	C
ATOM	1309	CE	LYS A 176	34.114	18.065	10.148	1.00	37.89	C
ATOM	1310	NZ	LYS A 176	32.736	18.469	9.746	1.00	40.12	N
ATOM	1311	N	ARG A 177	37.060	21.397	14.993	1.00	29.00	N
ATOM	1312	CA	ARG A 177	37.164	22.671	15.710	1.00	29.17	C
ATOM	1313	C	ARG A 177	38.260	22.741	16.781	1.00	28.13	C
ATOM	1314	O	ARG A 177	38.433	23.788	17.394	1.00	27.46	O
ATOM	1315	CB	ARG A 177	35.831	23.025	16.391	1.00	29.67	C
ATOM	1316	CG	ARG A 177	34.606	22.876	15.536	1.00	31.86	C
ATOM	1317	CD	ARG A 177	34.629	23.648	14.243	1.00	35.68	C
ATOM	1318	NE	ARG A 177	33.691	23.034	13.313	1.00	38.08	N
ATOM	1319	CZ	ARG A 177	33.865	22.938	12.015	1.00	40.57	C
ATOM	1320	NH1	ARG A 177	34.958	23.420	11.436	1.00	41.44	N
ATOM	1321	NH2	ARG A 177	32.927	22.362	11.283	1.00	42.98	N
ATOM	1322	N	GLY A 178	38.972	21.640	17.014	1.00	27.36	N
ATOM	1323	CA	GLY A 178	40.013	21.589	18.028	1.00	26.75	C
ATOM	1324	C	GLY A 178	39.460	21.655	19.444	1.00	26.55	C
ATOM	1325	O	GLY A 178	40.175	21.999	20.394	1.00	27.31	O
ATOM	1326	N	TRP A 179	38.195	21.308	19.620	1.00	25.19	N
ATOM	1327	CA	TRP A 179	37.626	21.379	20.947	1.00	25.17	C
ATOM	1328	C	TRP A 179	38.257	20.404	21.926	1.00	25.28	C
ATOM	1329	O	TRP A 179	38.909	19.454	21.541	1.00	24.67	O
ATOM	1330	CB	TRP A 179	36.127	21.139	20.901	1.00	24.78	C
ATOM	1331	CG	TRP A 179	35.364	22.197	20.201	1.00	24.55	C
ATOM	1332	CD1	TRP A 179	35.830	23.425	19.776	1.00	23.00	C

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ATOM   1333  CD2 TRP A 179      33.985  22.140  19.825  1.00 24.35           C
ATOM   1334  NE1 TRP A 179      34.822  24.122  19.153  1.00 24.53           N
ATOM   1335  CE2 TRP A 179      33.676  23.355  19.167  1.00 24.34           C
ATOM   1336  CE3 TRP A 179      32.982  21.177  19.957  1.00 23.62           C
ATOM   1337  CZ2 TRP A 179      32.417  23.627  18.659  1.00 22.63           C
ATOM   1338  CZ3 TRP A 179      31.726  21.454  19.442  1.00 24.07           C
ATOM   1339  CH2 TRP A 179      31.453  22.674  18.811  1.00 23.17           C
ATOM   1340  N   GLY A 180      38.061  20.669  23.210  1.00 25.61           N
ATOM   1341  CA  GLY A 180      38.471  19.737  24.240  1.00 25.44           C
ATOM   1342  C   GLY A 180      37.428  18.634  24.377  1.00 26.09           C
ATOM   1343  O   GLY A 180      36.592  18.432  23.491  1.00 26.60           O
ATOM   1344  N   GLN A 181      37.448  17.934  25.503  1.00 26.33           N
ATOM   1345  CA  GLN A 181      36.561  16.806  25.708  1.00 26.77           C
ATOM   1346  C   GLN A 181      35.099  17.180  25.953  1.00 26.26           C
ATOM   1347  O   GLN A 181      34.775  18.291  26.371  1.00 25.90           O
ATOM   1348  CB  GLN A 181      37.044  15.970  26.887  1.00 27.12           C
ATOM   1349  CG  GLN A 181      36.689  16.543  28.269  1.00 29.66           C
ATOM   1350  CD  GLN A 181      36.917  15.533  29.388  1.00 33.17           C
ATOM   1351  OE1 GLN A 181      38.055  15.295  29.791  1.00 35.52           O
ATOM   1352  NE2 GLN A 181      35.839  14.920  29.869  1.00 35.59           N
ATOM   1353  N   LEU A 182      34.238  16.225  25.646  1.00 25.83           N
ATOM   1354  CA  LEU A 182      32.831  16.241  26.021  1.00 25.59           C
ATOM   1355  C   LEU A 182      32.850  16.162  27.543  1.00 24.45           C
ATOM   1356  O   LEU A 182      33.433  15.209  28.084  1.00 23.27           O
ATOM   1357  CB  LEU A 182      32.180  14.958  25.499  1.00 25.74           C
ATOM   1358  CG  LEU A 182      30.666  14.790  25.403  1.00 28.29           C
ATOM   1359  CD1 LEU A 182      30.276  13.328  25.676  1.00 27.13           C
ATOM   1360  CD2 LEU A 182      29.928  15.671  26.303  1.00 30.64           C
ATOM   1361  N   THR A 183      32.288  17.158  28.239  1.00 23.24           N
ATOM   1362  CA  THR A 183      32.256  17.110  29.699  1.00 22.37           C
ATOM   1363  C   THR A 183      30.956  16.504  30.150  1.00 22.01           C
ATOM   1364  O   THR A 183      30.907  15.867  31.186  1.00 21.99           O
ATOM   1365  CB  THR A 183      32.395  18.504  30.371  1.00 22.62           C
ATOM   1366  OG1 THR A 183      31.367  19.393  29.893  1.00 20.93           O
ATOM   1367  CG2 THR A 183      33.707  19.154  30.013  1.00 22.33           C
ATOM   1368  N   SER A 184      29.885  16.711  29.396  1.00 21.54           N
ATOM   1369  CA  SER A 184      28.622  16.146  29.810  1.00 21.58           C
ATOM   1370  C   SER A 184      27.498  16.381  28.866  1.00 21.50           C
ATOM   1371  O   SER A 184      27.610  17.168  27.928  1.00 21.85           O
ATOM   1372  CB  SER A 184      28.209  16.715  31.158  1.00 21.78           C
ATOM   1373  OG  SER A 184      27.856  18.072  31.056  1.00 23.20           O
ATOM   1374  N   ASN A 185      26.416  15.667  29.134  1.00 21.14           N
ATOM   1375  CA  ASN A 185      25.167  15.807  28.427  1.00 22.40           C
ATOM   1376  C   ASN A 185      24.104  16.059  29.459  1.00 22.16           C
ATOM   1377  O   ASN A 185      23.802  15.189  30.272  1.00 22.11           O
ATOM   1378  CB  ASN A 185      24.794  14.523  27.664  1.00 22.46           C
ATOM   1379  CG  ASN A 185      25.798  14.174  26.604  1.00 23.64           C
ATOM   1380  OD1 ASN A 185      26.582  13.257  26.789  1.00 25.26           O
ATOM   1381  ND2 ASN A 185      25.794  14.907  25.494  1.00 22.02           N
ATOM   1382  N   LEU A 186      23.507  17.228  29.391  1.00 22.02           N
ATOM   1383  CA  LEU A 186      22.461  17.600  30.319  1.00 22.34           C
ATOM   1384  C   LEU A 186      21.114  17.251  29.707  1.00 22.21           C
ATOM   1385  O   LEU A 186      20.808  17.623  28.582  1.00 22.59           O
ATOM   1386  CB  LEU A 186      22.519  19.111  30.591  1.00 22.36           C
ATOM   1387  CG  LEU A 186      21.650  19.642  31.739  1.00 23.03           C
ATOM   1388  CD1 LEU A 186      22.124  19.073  33.069  1.00 22.66           C
ATOM   1389  CD2 LEU A 186      21.636  21.213  31.782  1.00 21.88           C
ATOM   1390  N   LEU A 187      20.307  16.530  30.461  1.00 22.39           N
ATOM   1391  CA  LEU A 187      18.949  16.234  30.057  1.00 21.93           C
ATOM   1392  C   LEU A 187      18.089  17.336  30.659  1.00 21.94           C
ATOM   1393  O   LEU A 187      18.163  17.569  31.870  1.00 21.56           O
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ATOM	1394	CB	LEU A 187	18.525	14.883	30.604	1.00	21.36	C
ATOM	1395	CG	LEU A 187	17.037	14.555	30.489	1.00	22.46	C
ATOM	1396	CD1	LEU A 187	16.550	14.530	29.038	1.00	22.25	C
ATOM	1397	CD2	LEU A 187	16.783	13.200	31.154	1.00	22.25	C
ATOM	1398	N	LEU A 188	17.301	18.028	29.826	1.00	21.68	N
ATOM	1399	CA	LEU A 188	16.400	19.052	30.329	1.00	22.46	C
ATOM	1400	C	LEU A 188	14.925	18.743	30.021	1.00	22.70	C
ATOM	1401	O	LEU A 188	14.511	18.622	28.864	1.00	23.01	O
ATOM	1402	CB	LEU A 188	16.747	20.432	29.769	1.00	22.51	C
ATOM	1403	CG	LEU A 188	18.166	20.932	29.998	1.00	24.09	C
ATOM	1404	CD1	LEU A 188	18.916	20.996	28.697	1.00	26.99	C
ATOM	1405	CD2	LEU A 188	18.135	22.308	30.564	1.00	25.94	C
ATOM	1406	N	ILE A 189	14.117	18.652	31.061	1.00	22.31	N
ATOM	1407	CA	ILE A 189	12.721	18.383	30.851	1.00	22.23	C
ATOM	1408	C	ILE A 189	11.959	19.459	31.554	1.00	22.43	C
ATOM	1409	O	ILE A 189	12.045	19.599	32.773	1.00	22.44	O
ATOM	1410	CB	ILE A 189	12.328	17.009	31.369	1.00	21.56	C
ATOM	1411	CG1	ILE A 189	13.178	15.944	30.695	1.00	21.26	C
ATOM	1412	CG2	ILE A 189	10.873	16.794	31.078	1.00	21.74	C
ATOM	1413	CD1	ILE A 189	12.851	14.481	31.136	1.00	22.52	C
ATOM	1414	N	GLY A 190	11.226	20.239	30.770	1.00	23.11	N
ATOM	1415	CA	GLY A 190	10.545	21.396	31.294	1.00	23.06	C
ATOM	1416	C	GLY A 190	9.084	21.395	30.988	1.00	23.56	C
ATOM	1417	O	GLY A 190	8.594	20.646	30.117	1.00	23.29	O
ATOM	1418	N	MET A 191	8.385	22.224	31.755	1.00	24.04	N
ATOM	1419	CA	MET A 191	6.980	22.468	31.542	1.00	24.73	C
ATOM	1420	C	MET A 191	6.837	23.623	30.576	1.00	24.58	C
ATOM	1421	O	MET A 191	7.747	24.464	30.443	1.00	24.72	O
ATOM	1422	CB	MET A 191	6.301	22.821	32.860	1.00	25.52	C
ATOM	1423	CG	MET A 191	6.212	21.649	33.806	1.00	26.99	C
ATOM	1424	SD	MET A 191	5.710	22.122	35.447	1.00	30.62	S
ATOM	1425	CE	MET A 191	4.076	22.639	35.135	1.00	32.05	C
ATOM	1426	N	GLU A 192	5.701	23.659	29.893	1.00	24.37	N
ATOM	1427	CA	GLU A 192	5.407	24.718	28.940	1.00	24.51	C
ATOM	1428	C	GLU A 192	5.468	26.072	29.628	1.00	24.20	C
ATOM	1429	O	GLU A 192	5.013	26.237	30.745	1.00	24.12	O
ATOM	1430	CB	GLU A 192	4.029	24.514	28.342	1.00	24.59	C
ATOM	1431	CG	GLU A 192	2.930	24.487	29.384	1.00	26.08	C
ATOM	1432	CD	GLU A 192	1.590	24.051	28.830	1.00	26.38	C
ATOM	1433	OE1	GLU A 192	1.530	23.568	27.676	1.00	27.04	O
ATOM	1434	OE2	GLU A 192	0.599	24.219	29.562	1.00	25.46	O
ATOM	1435	N	GLY A 193	6.045	27.051	28.962	1.00	24.44	N
ATOM	1436	CA	GLY A 193	6.153	28.364	29.562	1.00	24.21	C
ATOM	1437	C	GLY A 193	7.428	28.565	30.358	1.00	23.71	C
ATOM	1438	O	GLY A 193	7.728	29.691	30.697	1.00	24.97	O
ATOM	1439	N	ASN A 194	8.181	27.507	30.663	1.00	23.27	N
ATOM	1440	CA	ASN A 194	9.445	27.656	31.413	1.00	22.47	C
ATOM	1441	C	ASN A 194	10.465	28.476	30.636	1.00	22.35	C
ATOM	1442	O	ASN A 194	10.594	28.317	29.416	1.00	22.38	O
ATOM	1443	CB	ASN A 194	10.108	26.299	31.708	1.00	22.17	C
ATOM	1444	CG	ASN A 194	9.476	25.555	32.882	1.00	22.24	C
ATOM	1445	OD1	ASN A 194	8.477	25.992	33.453	1.00	23.81	O
ATOM	1446	ND2	ASN A 194	10.075	24.429	33.253	1.00	18.58	N
ATOM	1447	N	VAL A 195	11.226	29.295	31.362	1.00	21.64	N
ATOM	1448	CA	VAL A 195	12.263	30.114	30.789	1.00	21.41	C
ATOM	1449	C	VAL A 195	13.569	29.988	31.556	1.00	20.40	C
ATOM	1450	O	VAL A 195	13.603	30.014	32.790	1.00	20.03	O
ATOM	1451	CB	VAL A 195	11.889	31.621	30.828	1.00	21.72	C
ATOM	1452	CG1	VAL A 195	13.038	32.476	30.327	1.00	21.84	C
ATOM	1453	CG2	VAL A 195	10.628	31.904	30.043	1.00	23.61	C
ATOM	1454	N	THR A 196	14.644	29.834	30.813	1.00	19.77	N

ATOM	1455	CA	THR A 196	15.980	29.917	31.376	1.00	20.37	C
ATOM	1456	C	THR A 196	16.467	31.291	30.933	1.00	20.92	C
ATOM	1457	O	THR A 196	16.649	31.505	29.724	1.00	20.45	O
ATOM	1458	CB	THR A 196	16.882	28.865	30.793	1.00	19.87	C
ATOM	1459	OG1	THR A 196	16.457	27.564	31.227	1.00	21.07	O
ATOM	1460	CG2	THR A 196	18.273	29.043	31.340	1.00	20.00	C
ATOM	1461	N	PRO A 197	16.602	32.225	31.879	1.00	21.53	N
ATOM	1462	CA	PRO A 197	16.997	33.609	31.572	1.00	22.24	C
ATOM	1463	C	PRO A 197	18.375	33.688	30.952	1.00	22.26	C
ATOM	1464	O	PRO A 197	19.195	32.773	31.130	1.00	22.66	O
ATOM	1465	CB	PRO A 197	16.998	34.305	32.934	1.00	22.51	C
ATOM	1466	CG	PRO A 197	16.282	33.411	33.839	1.00	22.92	C
ATOM	1467	CD	PRO A 197	16.367	32.028	33.312	1.00	21.85	C
ATOM	1468	N	ALA A 198	18.606	34.776	30.234	1.00	21.54	N
ATOM	1469	CA	ALA A 198	19.821	34.976	29.486	1.00	21.47	C
ATOM	1470	C	ALA A 198	21.110	34.764	30.282	1.00	21.22	C
ATOM	1471	O	ALA A 198	21.298	35.310	31.386	1.00	20.56	O
ATOM	1472	CB	ALA A 198	19.809	36.397	28.891	1.00	21.92	C
ATOM	1473	N	HIS A 199	22.023	34.020	29.683	1.00	21.01	N
ATOM	1474	CA	HIS A 199	23.321	33.764	30.288	1.00	21.40	C
ATOM	1475	C	HIS A 199	24.250	33.279	29.213	1.00	21.61	C
ATOM	1476	O	HIS A 199	23.811	33.017	28.089	1.00	21.18	O
ATOM	1477	CB	HIS A 199	23.217	32.669	31.338	1.00	21.05	C
ATOM	1478	CG	HIS A 199	22.864	31.354	30.746	1.00	22.98	C
ATOM	1479	ND1	HIS A 199	21.576	31.048	30.370	1.00	21.97	N
ATOM	1480	CD2	HIS A 199	23.630	30.287	30.399	1.00	21.48	C
ATOM	1481	CE1	HIS A 199	21.558	29.838	29.838	1.00	22.85	C
ATOM	1482	NE2	HIS A 199	22.791	29.368	29.821	1.00	24.36	N
ATOM	1483	N	TYR A 200	25.538	33.177	29.555	1.00	22.22	N
ATOM	1484	CA	TYR A 200	26.531	32.597	28.654	1.00	22.56	C
ATOM	1485	C	TYR A 200	27.234	31.448	29.380	1.00	22.96	C
ATOM	1486	O	TYR A 200	27.293	31.430	30.612	1.00	22.90	O
ATOM	1487	CB	TYR A 200	27.528	33.610	28.129	1.00	22.56	C
ATOM	1488	CG	TYR A 200	28.492	34.228	29.145	1.00	23.02	C
ATOM	1489	CD1	TYR A 200	29.731	33.671	29.385	1.00	22.79	C
ATOM	1490	CD2	TYR A 200	28.180	35.419	29.799	1.00	23.89	C
ATOM	1491	CE1	TYR A 200	30.612	34.229	30.283	1.00	22.32	C
ATOM	1492	CE2	TYR A 200	29.062	35.991	30.722	1.00	22.06	C
ATOM	1493	CZ	TYR A 200	30.277	35.402	30.947	1.00	22.13	C
ATOM	1494	OH	TYR A 200	31.163	35.957	31.843	1.00	20.46	O
ATOM	1495	N	ASP A 201	27.723	30.467	28.619	1.00	23.11	N
ATOM	1496	CA	ASP A 201	28.433	29.326	29.213	1.00	23.02	C
ATOM	1497	C	ASP A 201	29.833	29.338	28.687	1.00	23.38	C
ATOM	1498	O	ASP A 201	30.038	29.811	27.597	1.00	24.05	O
ATOM	1499	CB	ASP A 201	27.776	28.012	28.829	1.00	22.85	C
ATOM	1500	CG	ASP A 201	26.365	27.898	29.338	1.00	21.12	C
ATOM	1501	OD1	ASP A 201	26.176	27.802	30.568	1.00	23.22	O
ATOM	1502	OD2	ASP A 201	25.387	27.845	28.574	1.00	20.55	O
ATOM	1503	N	GLU A 202	30.799	28.820	29.437	1.00	23.78	N
ATOM	1504	CA	GLU A 202	32.184	28.782	28.950	1.00	25.14	C
ATOM	1505	C	GLU A 202	32.524	27.467	28.269	1.00	24.96	C
ATOM	1506	O	GLU A 202	33.657	27.001	28.394	1.00	26.76	O
ATOM	1507	CB	GLU A 202	33.218	28.965	30.091	1.00	24.67	C
ATOM	1508	CG	GLU A 202	33.017	30.199	30.941	1.00	27.79	C
ATOM	1509	CD	GLU A 202	34.089	30.312	32.025	1.00	30.13	C
ATOM	1510	OE1	GLU A 202	34.018	29.584	33.030	1.00	32.67	O
ATOM	1511	OE2	GLU A 202	35.010	31.114	31.844	1.00	29.05	O
ATOM	1512	N	GLN A 203	31.547	26.818	27.653	1.00	24.30	N
ATOM	1513	CA	GLN A 203	31.804	25.624	26.874	1.00	23.24	C
ATOM	1514	C	GLN A 203	31.036	25.764	25.572	1.00	22.84	C
ATOM	1515	O	GLN A 203	30.122	26.560	25.468	1.00	23.00	O

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ATOM   1516  CB   GLN A 203      31.373  24.363  27.618  1.00 23.43           C
ATOM   1517  CG   GLN A 203      32.256  24.031  28.826  1.00 23.66           C
ATOM   1518  CD   GLN A 203      32.061  22.612  29.354  1.00 25.58           C
ATOM   1519  OE1  GLN A 203      31.915  21.661  28.582  1.00 27.85           O
ATOM   1520  NE2  GLN A 203      32.084  22.468  30.670  1.00 25.67           N
ATOM   1521  N    GLN A 204      31.465  25.013  24.575  1.00 22.51           N
ATOM   1522  CA   GLN A 204      30.791  24.910  23.299  1.00 22.51           C
ATOM   1523  C    GLN A 204      29.626  23.980  23.504  1.00 21.70           C
ATOM   1524  O    GLN A 204      29.737  23.026  24.255  1.00 21.24           O
ATOM   1525  CB   GLN A 204      31.718  24.307  22.255  1.00 22.29           C
ATOM   1526  CG   GLN A 204      33.001  25.081  22.072  1.00 22.69           C
ATOM   1527  CD   GLN A 204      32.820  26.346  21.259  1.00 22.39           C
ATOM   1528  OE1  GLN A 204      31.699  26.736  20.932  1.00 19.22           O
ATOM   1529  NE2  GLN A 204      33.937  26.970  20.906  1.00 19.77           N
ATOM   1530  N    ASN A 205      28.523  24.241  22.810  1.00 21.48           N
ATOM   1531  CA   ASN A 205      27.309  23.471  23.017  1.00 21.04           C
ATOM   1532  C    ASN A 205      26.558  23.136  21.730  1.00 21.10           C
ATOM   1533  O    ASN A 205      26.188  24.043  20.949  1.00 20.02           O
ATOM   1534  CB   ASN A 205      26.401  24.322  23.920  1.00 21.70           C
ATOM   1535  CG   ASN A 205      25.084  23.654  24.269  1.00 21.87           C
ATOM   1536  OD1  ASN A 205      24.732  22.577  23.775  1.00 22.07           O
ATOM   1537  ND2  ASN A 205      24.332  24.320  25.118  1.00 19.37           N
ATOM   1538  N    PHE A 206      26.350  21.835  21.497  1.00 20.28           N
ATOM   1539  CA   PHE A 206      25.372  21.414  20.523  1.00 20.14           C
ATOM   1540  C    PHE A 206      24.141  21.030  21.323  1.00 19.94           C
ATOM   1541  O    PHE A 206      24.164  20.052  22.065  1.00 20.71           O
ATOM   1542  CB   PHE A 206      25.851  20.238  19.693  1.00 20.65           C
ATOM   1543  CG   PHE A 206      26.799  20.618  18.620  1.00 20.30           C
ATOM   1544  CD1  PHE A 206      26.394  21.438  17.600  1.00 20.89           C
ATOM   1545  CD2  PHE A 206      28.101  20.168  18.642  1.00 21.26           C
ATOM   1546  CE1  PHE A 206      27.254  21.783  16.605  1.00 22.17           C
ATOM   1547  CE2  PHE A 206      28.980  20.523  17.641  1.00 21.31           C
ATOM   1548  CZ   PHE A 206      28.558  21.336  16.632  1.00 21.79           C
ATOM   1549  N    PHE A 207      23.058  21.764  21.081  1.00 19.87           N
ATOM   1550  CA   PHE A 207      21.790  21.723  21.824  1.00 20.08           C
ATOM   1551  C    PHE A 207      20.766  20.988  20.975  1.00 20.29           C
ATOM   1552  O    PHE A 207      20.276  21.519  20.011  1.00 19.94           O
ATOM   1553  CB   PHE A 207      21.385  23.190  22.083  1.00 20.46           C
ATOM   1554  CG   PHE A 207      20.129  23.404  22.890  1.00 19.14           C
ATOM   1555  CD1  PHE A 207      18.947  23.708  22.267  1.00 19.77           C
ATOM   1556  CD2  PHE A 207      20.169  23.428  24.259  1.00 19.99           C
ATOM   1557  CE1  PHE A 207      17.818  23.980  22.984  1.00 21.67           C
ATOM   1558  CE2  PHE A 207      19.037  23.683  24.992  1.00 22.36           C
ATOM   1559  CZ   PHE A 207      17.854  23.975  24.351  1.00 22.30           C
ATOM   1560  N    ALA A 208      20.480  19.746  21.352  1.00 21.01           N
ATOM   1561  CA   ALA A 208      19.688  18.827  20.541  1.00 21.26           C
ATOM   1562  C    ALA A 208      18.260  18.669  21.030  1.00 21.74           C
ATOM   1563  O    ALA A 208      18.000  17.983  22.049  1.00 21.21           O
ATOM   1564  CB   ALA A 208      20.365  17.464  20.557  1.00 20.94           C
ATOM   1565  N    GLN A 209      17.329  19.245  20.276  1.00 21.56           N
ATOM   1566  CA   GLN A 209      15.940  19.219  20.697  1.00 21.78           C
ATOM   1567  C    GLN A 209      15.289  17.864  20.393  1.00 21.84           C
ATOM   1568  O    GLN A 209      15.506  17.245  19.323  1.00 20.40           O
ATOM   1569  CB   GLN A 209      15.203  20.391  20.068  1.00 22.08           C
ATOM   1570  CG   GLN A 209      13.790  20.597  20.542  1.00 22.02           C
ATOM   1571  CD   GLN A 209      13.688  20.986  22.013  1.00 22.84           C
ATOM   1572  OE1  GLN A 209      14.700  21.240  22.678  1.00 22.55           O
ATOM   1573  NE2  GLN A 209      12.448  21.034  22.524  1.00 21.97           N
ATOM   1574  N    ILE A 210      14.480  17.418  21.351  1.00 22.17           N
ATOM   1575  CA   ILE A 210      13.904  16.084  21.329  1.00 22.53           C
ATOM   1576  C    ILE A 210      12.397  16.074  21.316  1.00 23.45           C
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ATOM	1577	O	ILE A 210	11.813	15.429	20.467	1.00	24.08	O
ATOM	1578	CB	ILE A 210	14.411	15.306	22.541	1.00	22.81	C
ATOM	1579	CG1	ILE A 210	15.857	14.886	22.284	1.00	23.77	C
ATOM	1580	CG2	ILE A 210	13.573	14.064	22.785	1.00	23.17	C
ATOM	1581	CD1	ILE A 210	16.631	14.512	23.519	1.00	24.86	C
ATOM	1582	N	LYS A 211	11.772	16.778	22.258	1.00	23.73	N
ATOM	1583	CA	LYS A 211	10.318	16.829	22.351	1.00	22.99	C
ATOM	1584	C	LYS A 211	9.873	18.253	22.566	1.00	22.73	C
ATOM	1585	O	LYS A 211	10.436	18.969	23.391	1.00	22.34	O
ATOM	1586	CB	LYS A 211	9.818	16.014	23.527	1.00	23.40	C
ATOM	1587	CG	LYS A 211	8.285	15.757	23.509	1.00	24.55	C
ATOM	1588	CD	LYS A 211	7.794	15.232	24.870	1.00	25.75	C
ATOM	1589	CE	LYS A 211	6.389	14.579	24.861	1.00	25.61	C
ATOM	1590	NZ	LYS A 211	5.580	14.641	23.613	1.00	25.29	N
ATOM	1591	N	GLY A 212	8.832	18.655	21.847	1.00	22.34	N
ATOM	1592	CA	GLY A 212	8.292	19.989	21.983	1.00	22.46	C
ATOM	1593	C	GLY A 212	9.188	21.026	21.338	1.00	22.40	C
ATOM	1594	O	GLY A 212	10.172	20.705	20.650	1.00	21.93	O
ATOM	1595	N	TYR A 213	8.859	22.281	21.592	1.00	22.95	N
ATOM	1596	CA	TYR A 213	9.530	23.400	20.944	1.00	23.32	C
ATOM	1597	C	TYR A 213	10.079	24.412	21.926	1.00	23.27	C
ATOM	1598	O	TYR A 213	9.434	24.740	22.918	1.00	23.34	O
ATOM	1599	CB	TYR A 213	8.547	24.092	20.012	1.00	23.77	C
ATOM	1600	CG	TYR A 213	8.133	23.198	18.887	1.00	25.58	C
ATOM	1601	CD1	TYR A 213	7.110	22.261	19.041	1.00	28.74	C
ATOM	1602	CD2	TYR A 213	8.798	23.253	17.687	1.00	28.55	C
ATOM	1603	CE1	TYR A 213	6.764	21.410	17.995	1.00	30.77	C
ATOM	1604	CE2	TYR A 213	8.465	22.429	16.651	1.00	30.41	C
ATOM	1605	CZ	TYR A 213	7.461	21.516	16.795	1.00	31.44	C
ATOM	1606	OH	TYR A 213	7.188	20.720	15.708	1.00	35.50	O
ATOM	1607	N	LYS A 214	11.270	24.911	21.620	1.00	22.60	N
ATOM	1608	CA	LYS A 214	11.916	25.911	22.431	1.00	22.58	C
ATOM	1609	C	LYS A 214	12.353	27.077	21.576	1.00	22.52	C
ATOM	1610	O	LYS A 214	12.937	26.898	20.493	1.00	23.74	O
ATOM	1611	CB	LYS A 214	13.132	25.345	23.169	1.00	22.31	C
ATOM	1612	CG	LYS A 214	12.784	24.539	24.392	1.00	22.79	C
ATOM	1613	CD	LYS A 214	14.053	24.007	25.077	1.00	22.96	C
ATOM	1614	CE	LYS A 214	13.821	23.675	26.530	1.00	20.69	C
ATOM	1615	NZ	LYS A 214	15.076	23.085	27.149	1.00	19.14	N
ATOM	1616	N	ARG A 215	12.037	28.277	22.047	1.00	21.95	N
ATOM	1617	CA	ARG A 215	12.480	29.482	21.378	1.00	21.48	C
ATOM	1618	C	ARG A 215	13.790	29.864	22.018	1.00	21.06	C
ATOM	1619	O	ARG A 215	13.890	29.954	23.230	1.00	20.53	O
ATOM	1620	CB	ARG A 215	11.466	30.582	21.576	1.00	22.15	C
ATOM	1621	CG	ARG A 215	11.843	31.913	20.969	1.00	22.00	C
ATOM	1622	CD	ARG A 215	11.231	33.041	21.727	1.00	23.87	C
ATOM	1623	NE	ARG A 215	11.224	34.272	20.959	1.00	25.87	N
ATOM	1624	CZ	ARG A 215	10.566	35.364	21.297	1.00	25.54	C
ATOM	1625	NH1	ARG A 215	9.873	35.425	22.423	1.00	24.05	N
ATOM	1626	NH2	ARG A 215	10.634	36.420	20.505	1.00	29.37	N
ATOM	1627	N	CYS A 216	14.794	30.090	21.193	1.00	21.48	N
ATOM	1628	CA	CYS A 216	16.123	30.355	21.668	1.00	21.40	C
ATOM	1629	C	CYS A 216	16.533	31.723	21.146	1.00	21.86	C
ATOM	1630	O	CYS A 216	16.532	31.952	19.948	1.00	22.82	O
ATOM	1631	CB	CYS A 216	17.079	29.309	21.127	1.00	21.46	C
ATOM	1632	SG	CYS A 216	16.689	27.562	21.469	1.00	22.63	S
ATOM	1633	N	ILE A 217	16.878	32.630	22.045	1.00	21.29	N
ATOM	1634	CA	ILE A 217	17.331	33.960	21.663	1.00	21.28	C
ATOM	1635	C	ILE A 217	18.782	34.114	22.102	1.00	20.86	C
ATOM	1636	O	ILE A 217	19.085	34.007	23.310	1.00	21.04	O
ATOM	1637	CB	ILE A 217	16.456	35.025	22.327	1.00	21.80	C

ATOM	1638	CG1	ILE	A	217	14.978	34.807	21.955	1.00	22.90	C
ATOM	1639	CG2	ILE	A	217	16.874	36.414	21.861	1.00	22.72	C
ATOM	1640	CD1	ILE	A	217	14.031	35.695	22.693	1.00	24.99	C
ATOM	1641	N	LEU	A	218	19.666	34.346	21.128	1.00	20.25	N
ATOM	1642	CA	LEU	A	218	21.094	34.451	21.373	1.00	20.55	C
ATOM	1643	C	LEU	A	218	21.630	35.853	21.128	1.00	21.19	C
ATOM	1644	O	LEU	A	218	21.141	36.560	20.253	1.00	21.62	O
ATOM	1645	CB	LEU	A	218	21.874	33.493	20.467	1.00	20.31	C
ATOM	1646	CG	LEU	A	218	21.964	32.019	20.906	1.00	20.46	C
ATOM	1647	CD1	LEU	A	218	20.628	31.415	21.054	1.00	20.19	C
ATOM	1648	CD2	LEU	A	218	22.732	31.229	19.907	1.00	22.84	C
ATOM	1649	N	PHE	A	219	22.658	36.231	21.886	1.00	21.06	N
ATOM	1650	CA	PHE	A	219	23.331	37.498	21.682	1.00	21.62	C
ATOM	1651	C	PHE	A	219	24.842	37.244	21.611	1.00	21.87	C
ATOM	1652	O	PHE	A	219	25.390	36.490	22.416	1.00	21.88	O
ATOM	1653	CB	PHE	A	219	23.005	38.484	22.820	1.00	20.94	C
ATOM	1654	CG	PHE	A	219	21.541	38.617	23.106	1.00	21.13	C
ATOM	1655	CD1	PHE	A	219	20.907	37.779	23.995	1.00	21.92	C
ATOM	1656	CD2	PHE	A	219	20.785	39.589	22.476	1.00	24.21	C
ATOM	1657	CE1	PHE	A	219	19.563	37.915	24.250	1.00	21.95	C
ATOM	1658	CE2	PHE	A	219	19.442	39.724	22.735	1.00	22.06	C
ATOM	1659	CZ	PHE	A	219	18.840	38.904	23.621	1.00	23.11	C
ATOM	1660	N	PRO	A	220	25.512	37.877	20.662	1.00	22.38	N
ATOM	1661	CA	PRO	A	220	26.962	37.744	20.557	1.00	22.81	C
ATOM	1662	C	PRO	A	220	27.683	38.287	21.793	1.00	22.78	C
ATOM	1663	O	PRO	A	220	27.173	39.123	22.564	1.00	22.88	O
ATOM	1664	CB	PRO	A	220	27.335	38.561	19.317	1.00	22.81	C
ATOM	1665	CG	PRO	A	220	26.005	39.005	18.685	1.00	23.68	C
ATOM	1666	CD	PRO	A	220	24.940	38.792	19.663	1.00	22.86	C
ATOM	1667	N	PRO	A	221	28.885	37.774	21.999	1.00	22.84	N
ATOM	1668	CA	PRO	A	221	29.724	38.204	23.124	1.00	22.73	C
ATOM	1669	C	PRO	A	221	29.976	39.714	23.143	1.00	22.28	C
ATOM	1670	O	PRO	A	221	30.192	40.279	24.212	1.00	21.03	O
ATOM	1671	CB	PRO	A	221	31.030	37.455	22.892	1.00	22.78	C
ATOM	1672	CG	PRO	A	221	30.644	36.296	22.026	1.00	23.22	C
ATOM	1673	CD	PRO	A	221	29.521	36.733	21.174	1.00	22.58	C
ATOM	1674	N	ASP	A	222	29.897	40.378	21.993	1.00	22.60	N
ATOM	1675	CA	ASP	A	222	30.172	41.821	21.965	1.00	22.84	C
ATOM	1676	C	ASP	A	222	28.996	42.623	22.493	1.00	23.36	C
ATOM	1677	O	ASP	A	222	29.031	43.847	22.500	1.00	24.43	O
ATOM	1678	CB	ASP	A	222	30.638	42.308	20.579	1.00	22.47	C
ATOM	1679	CG	ASP	A	222	29.502	42.389	19.537	1.00	25.07	C
ATOM	1680	OD1	ASP	A	222	28.355	41.942	19.764	1.00	25.24	O
ATOM	1681	OD2	ASP	A	222	29.690	42.876	18.410	1.00	29.46	O
ATOM	1682	N	GLN	A	223	27.940	41.940	22.926	1.00	23.79	N
ATOM	1683	CA	GLN	A	223	26.826	42.624	23.565	1.00	23.85	C
ATOM	1684	C	GLN	A	223	26.942	42.570	25.114	1.00	23.37	C
ATOM	1685	O	GLN	A	223	25.986	42.875	25.850	1.00	23.78	O
ATOM	1686	CB	GLN	A	223	25.510	42.084	23.007	1.00	24.80	C
ATOM	1687	CG	GLN	A	223	25.217	42.672	21.550	1.00	28.46	C
ATOM	1688	CD	GLN	A	223	23.786	42.471	21.094	1.00	32.35	C
ATOM	1689	OE1	GLN	A	223	22.861	42.619	21.893	1.00	36.73	O
ATOM	1690	NE2	GLN	A	223	23.592	42.105	19.815	1.00	33.48	N
ATOM	1691	N	PHE	A	224	28.111	42.167	25.601	1.00	21.59	N
ATOM	1692	CA	PHE	A	224	28.394	42.195	27.035	1.00	21.84	C
ATOM	1693	C	PHE	A	224	27.888	43.509	27.706	1.00	21.56	C
ATOM	1694	O	PHE	A	224	27.233	43.455	28.738	1.00	20.27	O
ATOM	1695	CB	PHE	A	224	29.917	42.068	27.271	1.00	21.34	C
ATOM	1696	CG	PHE	A	224	30.309	41.943	28.732	1.00	22.22	C
ATOM	1697	CD1	PHE	A	224	30.449	43.071	29.540	1.00	21.80	C
ATOM	1698	CD2	PHE	A	224	30.583	40.723	29.279	1.00	20.92	C

ATOM	1699	CE1	PHE	A	224	30.842	42.945	30.868	1.00	22.58	C
ATOM	1700	CE2	PHE	A	224	30.979	40.593	30.587	1.00	22.14	C
ATOM	1701	CZ	PHE	A	224	31.087	41.725	31.394	1.00	22.16	C
ATOM	1702	N	GLU	A	225	28.190	44.665	27.106	1.00	22.03	N
ATOM	1703	CA	GLU	A	225	27.813	45.963	27.677	1.00	23.55	C
ATOM	1704	C	GLU	A	225	26.322	46.216	27.764	1.00	23.06	C
ATOM	1705	O	GLU	A	225	25.907	47.129	28.483	1.00	22.10	O
ATOM	1706	CB	GLU	A	225	28.396	47.111	26.856	1.00	24.92	C
ATOM	1707	CG	GLU	A	225	29.897	47.228	27.013	1.00	30.17	C
ATOM	1708	CD	GLU	A	225	30.386	48.632	27.280	1.00	36.52	C
ATOM	1709	OE1	GLU	A	225	29.901	49.319	28.242	1.00	40.52	O
ATOM	1710	OE2	GLU	A	225	31.310	49.028	26.532	1.00	41.63	O
ATOM	1711	N	CYS	A	226	25.532	45.456	27.003	1.00	22.07	N
ATOM	1712	CA	CYS	A	226	24.087	45.619	27.027	1.00	22.09	C
ATOM	1713	C	CYS	A	226	23.372	44.631	27.935	1.00	21.89	C
ATOM	1714	O	CYS	A	226	22.170	44.781	28.162	1.00	20.73	O
ATOM	1715	CB	CYS	A	226	23.523	45.416	25.630	1.00	22.22	C
ATOM	1716	SG	CYS	A	226	24.206	46.488	24.368	1.00	22.59	S
ATOM	1717	N	LEU	A	227	24.102	43.633	28.451	1.00	22.08	N
ATOM	1718	CA	LEU	A	227	23.467	42.529	29.169	1.00	22.08	C
ATOM	1719	C	LEU	A	227	23.771	42.393	30.657	1.00	21.99	C
ATOM	1720	O	LEU	A	227	23.118	41.611	31.373	1.00	22.28	O
ATOM	1721	CB	LEU	A	227	23.751	41.244	28.418	1.00	22.29	C
ATOM	1722	CG	LEU	A	227	22.874	41.185	27.158	1.00	23.54	C
ATOM	1723	CD1	LEU	A	227	23.428	40.186	26.144	1.00	23.51	C
ATOM	1724	CD2	LEU	A	227	21.423	40.819	27.544	1.00	24.49	C
ATOM	1725	N	TYR	A	228	24.763	43.140	31.109	1.00	20.87	N
ATOM	1726	CA	TYR	A	228	24.996	43.320	32.521	1.00	21.33	C
ATOM	1727	C	TYR	A	228	25.018	42.057	33.382	1.00	21.27	C
ATOM	1728	O	TYR	A	228	24.205	41.920	34.301	1.00	21.72	O
ATOM	1729	CB	TYR	A	228	23.957	44.311	33.077	1.00	20.92	C
ATOM	1730	CG	TYR	A	228	23.949	45.649	32.339	1.00	20.91	C
ATOM	1731	CD1	TYR	A	228	24.768	46.677	32.739	1.00	18.87	C
ATOM	1732	CD2	TYR	A	228	23.122	45.862	31.232	1.00	20.51	C
ATOM	1733	CE1	TYR	A	228	24.780	47.912	32.076	1.00	20.36	C
ATOM	1734	CE2	TYR	A	228	23.117	47.074	30.561	1.00	21.07	C
ATOM	1735	CZ	TYR	A	228	23.931	48.113	31.000	1.00	20.84	C
ATOM	1736	OH	TYR	A	228	23.947	49.325	30.336	1.00	19.16	O
ATOM	1737	N	PRO	A	229	25.985	41.175	33.141	1.00	20.77	N
ATOM	1738	CA	PRO	A	229	26.128	39.971	33.966	1.00	21.05	C
ATOM	1739	C	PRO	A	229	26.428	40.332	35.408	1.00	20.08	C
ATOM	1740	O	PRO	A	229	27.021	41.379	35.675	1.00	20.20	O
ATOM	1741	CB	PRO	A	229	27.360	39.271	33.363	1.00	20.51	C
ATOM	1742	CG	PRO	A	229	28.084	40.340	32.651	1.00	21.64	C
ATOM	1743	CD	PRO	A	229	27.025	41.241	32.105	1.00	20.97	C
ATOM	1744	N	TYR	A	230	25.988	39.490	36.326	1.00	19.73	N
ATOM	1745	CA	TYR	A	230	26.282	39.656	37.724	1.00	18.80	C
ATOM	1746	C	TYR	A	230	27.809	39.657	37.947	1.00	18.61	C
ATOM	1747	O	TYR	A	230	28.575	39.250	37.094	1.00	18.26	O
ATOM	1748	CB	TYR	A	230	25.669	38.507	38.520	1.00	18.86	C
ATOM	1749	CG	TYR	A	230	24.172	38.597	38.725	1.00	19.28	C
ATOM	1750	CD1	TYR	A	230	23.297	38.110	37.760	1.00	18.53	C
ATOM	1751	CD2	TYR	A	230	23.629	39.172	39.885	1.00	19.38	C
ATOM	1752	CE1	TYR	A	230	21.932	38.161	37.935	1.00	18.86	C
ATOM	1753	CE2	TYR	A	230	22.234	39.222	40.076	1.00	19.53	C
ATOM	1754	CZ	TYR	A	230	21.404	38.719	39.073	1.00	20.93	C
ATOM	1755	OH	TYR	A	230	20.034	38.771	39.176	1.00	23.69	O
ATOM	1756	N	PRO	A	231	28.251	40.137	39.098	1.00	18.40	N
ATOM	1757	CA	PRO	A	231	29.651	39.983	39.476	1.00	18.58	C
ATOM	1758	C	PRO	A	231	30.070	38.507	39.399	1.00	19.41	C
ATOM	1759	O	PRO	A	231	29.240	37.624	39.654	1.00	18.89	O

ATOM	1760	CB	PRO A 231	29.675	40.477	40.931	1.00	18.95	C
ATOM	1761	CG	PRO A 231	28.542	41.507	41.001	1.00	19.02	C
ATOM	1762	CD	PRO A 231	27.460	40.868	40.105	1.00	18.02	C
ATOM	1763	N	VAL A 232	31.335	38.248	39.071	1.00	19.55	N
ATOM	1764	CA	VAL A 232	31.826	36.884	38.969	1.00	20.65	C
ATOM	1765	C	VAL A 232	31.640	36.034	40.236	1.00	20.79	C
ATOM	1766	O	VAL A 232	31.379	34.838	40.145	1.00	21.82	O
ATOM	1767	CB	VAL A 232	33.318	36.869	38.545	1.00	20.71	C
ATOM	1768	CG1	VAL A 232	33.945	35.524	38.807	1.00	21.96	C
ATOM	1769	CG2	VAL A 232	33.452	37.225	37.075	1.00	20.83	C
ATOM	1770	N	HIS A 233	31.770	36.639	41.409	1.00	20.87	N
ATOM	1771	CA	HIS A 233	31.643	35.907	42.661	1.00	20.70	C
ATOM	1772	C	HIS A 233	30.203	35.739	43.168	1.00	20.59	C
ATOM	1773	O	HIS A 233	29.940	35.010	44.119	1.00	20.49	O
ATOM	1774	CB	HIS A 233	32.482	36.593	43.706	1.00	20.63	C
ATOM	1775	CG	HIS A 233	33.948	36.529	43.426	1.00	21.92	C
ATOM	1776	ND1	HIS A 233	34.659	37.595	42.913	1.00	22.17	N
ATOM	1777	CD2	HIS A 233	34.843	35.527	43.610	1.00	22.03	C
ATOM	1778	CE1	HIS A 233	35.929	37.249	42.793	1.00	23.69	C
ATOM	1779	NE2	HIS A 233	36.066	35.998	43.203	1.00	23.04	N
ATOM	1780	N	HIS A 234	29.273	36.433	42.543	1.00	20.53	N
ATOM	1781	CA	HIS A 234	27.869	36.251	42.857	1.00	20.60	C
ATOM	1782	C	HIS A 234	27.388	34.895	42.306	1.00	20.45	C
ATOM	1783	O	HIS A 234	27.873	34.428	41.291	1.00	19.86	O
ATOM	1784	CB	HIS A 234	27.088	37.359	42.206	1.00	20.65	C
ATOM	1785	CG	HIS A 234	25.661	37.441	42.625	1.00	20.68	C
ATOM	1786	ND1	HIS A 234	24.667	36.700	42.021	1.00	21.46	N
ATOM	1787	CD2	HIS A 234	25.044	38.249	43.518	1.00	20.20	C
ATOM	1788	CE1	HIS A 234	23.504	37.013	42.563	1.00	21.99	C
ATOM	1789	NE2	HIS A 234	23.707	37.951	43.473	1.00	21.29	N
ATOM	1790	N	PRO A 235	26.463	34.261	43.007	1.00	20.40	N
ATOM	1791	CA	PRO A 235	25.888	32.993	42.572	1.00	20.85	C
ATOM	1792	C	PRO A 235	25.360	33.021	41.152	1.00	21.20	C
ATOM	1793	O	PRO A 235	25.437	31.984	40.502	1.00	20.43	O
ATOM	1794	CB	PRO A 235	24.756	32.771	43.575	1.00	21.58	C
ATOM	1795	CG	PRO A 235	25.273	33.452	44.826	1.00	20.78	C
ATOM	1796	CD	PRO A 235	25.941	34.685	44.317	1.00	20.56	C
ATOM	1797	N	CYS A 236	24.905	34.173	40.663	1.00	20.46	N
ATOM	1798	CA	CYS A 236	24.379	34.235	39.308	1.00	20.63	C
ATOM	1799	C	CYS A 236	25.430	34.707	38.301	1.00	20.58	C
ATOM	1800	O	CYS A 236	25.110	35.283	37.258	1.00	21.60	O
ATOM	1801	CB	CYS A 236	23.114	35.084	39.268	1.00	20.06	C
ATOM	1802	SG	CYS A 236	21.824	34.377	40.326	1.00	21.70	S
ATOM	1803	N	ASP A 237	26.693	34.474	38.629	1.00	20.17	N
ATOM	1804	CA	ASP A 237	27.785	34.632	37.679	1.00	19.98	C
ATOM	1805	C	ASP A 237	27.381	34.050	36.313	1.00	19.79	C
ATOM	1806	O	ASP A 237	26.830	32.950	36.234	1.00	19.19	O
ATOM	1807	CB	ASP A 237	28.997	33.872	38.200	1.00	19.91	C
ATOM	1808	CG	ASP A 237	30.209	33.968	37.290	1.00	21.43	C
ATOM	1809	OD1	ASP A 237	30.407	35.010	36.546	1.00	18.96	O
ATOM	1810	OD2	ASP A 237	31.039	33.017	37.288	1.00	18.57	O
ATOM	1811	N	ARG A 238	27.664	34.812	35.263	1.00	20.18	N
ATOM	1812	CA	ARG A 238	27.365	34.473	33.865	1.00	21.48	C
ATOM	1813	C	ARG A 238	25.905	34.713	33.444	1.00	20.90	C
ATOM	1814	O	ARG A 238	25.600	34.619	32.269	1.00	21.92	O
ATOM	1815	CB	ARG A 238	27.765	33.024	33.531	1.00	21.70	C
ATOM	1816	CG	ARG A 238	29.245	32.739	33.699	1.00	22.10	C
ATOM	1817	CD	ARG A 238	29.612	31.313	33.329	1.00	23.08	C
ATOM	1818	NE	ARG A 238	28.988	30.409	34.278	1.00	25.97	N
ATOM	1819	CZ	ARG A 238	27.863	29.725	34.066	1.00	27.01	C
ATOM	1820	NH1	ARG A 238	27.208	29.799	32.904	1.00	24.08	N

ATOM	1821	NH2	ARG	A	238	27.399	28.949	35.036	1.00	27.47	N
ATOM	1822	N	GLN	A	239	25.021	35.028	34.375	1.00	20.56	N
ATOM	1823	CA	GLN	A	239	23.641	35.334	34.014	1.00	21.11	C
ATOM	1824	C	GLN	A	239	23.459	36.865	33.920	1.00	20.84	C
ATOM	1825	O	GLN	A	239	24.145	37.624	34.610	1.00	21.25	O
ATOM	1826	CB	GLN	A	239	22.646	34.776	35.027	1.00	20.14	C
ATOM	1827	CG	GLN	A	239	23.052	33.505	35.726	1.00	22.87	C
ATOM	1828	CD	GLN	A	239	23.281	32.320	34.807	1.00	23.97	C
ATOM	1829	OE1	GLN	A	239	22.367	31.842	34.132	1.00	23.63	O
ATOM	1830	NE2	GLN	A	239	24.502	31.834	34.796	1.00	24.34	N
ATOM	1831	N	SER	A	240	22.541	37.307	33.071	1.00	20.31	N
ATOM	1832	CA	SER	A	240	22.246	38.725	32.926	1.00	19.92	C
ATOM	1833	C	SER	A	240	21.448	39.218	34.119	1.00	20.07	C
ATOM	1834	O	SER	A	240	20.538	38.533	34.564	1.00	19.79	O
ATOM	1835	CB	SER	A	240	21.384	38.953	31.700	1.00	19.45	C
ATOM	1836	OG	SER	A	240	21.018	40.312	31.564	1.00	20.53	O
ATOM	1837	N	GLN	A	241	21.763	40.408	34.623	1.00	19.46	N
ATOM	1838	CA	GLN	A	241	20.962	40.988	35.701	1.00	20.32	C
ATOM	1839	C	GLN	A	241	19.657	41.569	35.175	1.00	20.51	C
ATOM	1840	O	GLN	A	241	18.808	41.956	35.959	1.00	21.06	O
ATOM	1841	CB	GLN	A	241	21.697	42.141	36.417	1.00	20.15	C
ATOM	1842	CG	GLN	A	241	22.910	41.749	37.230	1.00	21.41	C
ATOM	1843	CD	GLN	A	241	23.690	42.980	37.695	1.00	22.76	C
ATOM	1844	OE1	GLN	A	241	23.455	43.481	38.775	1.00	24.42	O
ATOM	1845	NE2	GLN	A	241	24.585	43.465	36.871	1.00	21.93	N
ATOM	1846	N	VAL	A	242	19.489	41.678	33.862	1.00	20.66	N
ATOM	1847	CA	VAL	A	242	18.309	42.355	33.372	1.00	20.76	C
ATOM	1848	C	VAL	A	242	17.089	41.465	33.391	1.00	21.26	C
ATOM	1849	O	VAL	A	242	17.119	40.352	32.871	1.00	21.01	O
ATOM	1850	CB	VAL	A	242	18.476	42.813	31.909	1.00	20.97	C
ATOM	1851	CG1	VAL	A	242	17.194	43.502	31.431	1.00	21.21	C
ATOM	1852	CG2	VAL	A	242	19.687	43.704	31.716	1.00	18.95	C
ATOM	1853	N	ASP	A	243	16.001	41.960	33.958	1.00	21.16	N
ATOM	1854	CA	ASP	A	243	14.730	41.223	33.907	1.00	21.36	C
ATOM	1855	C	ASP	A	243	14.091	41.523	32.552	1.00	21.20	C
ATOM	1856	O	ASP	A	243	13.566	42.631	32.310	1.00	19.97	O
ATOM	1857	CB	ASP	A	243	13.840	41.682	35.054	1.00	21.65	C
ATOM	1858	CG	ASP	A	243	12.474	41.051	35.037	1.00	22.45	C
ATOM	1859	OD1	ASP	A	243	12.122	40.338	34.070	1.00	25.16	O
ATOM	1860	OD2	ASP	A	243	11.671	41.232	35.978	1.00	25.29	O
ATOM	1861	N	PHE	A	244	14.182	40.554	31.650	1.00	21.28	N
ATOM	1862	CA	PHE	A	244	13.687	40.733	30.291	1.00	21.65	C
ATOM	1863	C	PHE	A	244	12.202	41.074	30.274	1.00	22.36	C
ATOM	1864	O	PHE	A	244	11.733	41.653	29.304	1.00	22.09	O
ATOM	1865	CB	PHE	A	244	13.915	39.478	29.442	1.00	22.22	C
ATOM	1866	CG	PHE	A	244	15.284	39.370	28.815	1.00	21.43	C
ATOM	1867	CD1	PHE	A	244	16.414	39.800	29.465	1.00	20.12	C
ATOM	1868	CD2	PHE	A	244	15.422	38.778	27.575	1.00	21.05	C
ATOM	1869	CE1	PHE	A	244	17.655	39.671	28.873	1.00	20.83	C
ATOM	1870	CE2	PHE	A	244	16.645	38.643	26.993	1.00	21.47	C
ATOM	1871	CZ	PHE	A	244	17.767	39.104	27.633	1.00	20.74	C
ATOM	1872	N	ASP	A	245	11.464	40.696	31.322	1.00	23.26	N
ATOM	1873	CA	ASP	A	245	10.035	40.973	31.393	1.00	24.31	C
ATOM	1874	C	ASP	A	245	9.756	42.401	31.877	1.00	25.05	C
ATOM	1875	O	ASP	A	245	8.679	42.916	31.646	1.00	24.27	O
ATOM	1876	CB	ASP	A	245	9.333	40.004	32.348	1.00	24.79	C
ATOM	1877	CG	ASP	A	245	9.397	38.571	31.887	1.00	25.46	C
ATOM	1878	OD1	ASP	A	245	9.409	38.342	30.663	1.00	27.47	O
ATOM	1879	OD2	ASP	A	245	9.445	37.610	32.678	1.00	25.22	O
ATOM	1880	N	ASN	A	246	10.702	43.006	32.589	1.00	25.30	N
ATOM	1881	CA	ASN	A	246	10.531	44.365	33.099	1.00	26.37	C

ATOM	1882	C	ASN A 246	11.876	45.054	33.204	1.00	25.61	C
ATOM	1883	O	ASN A 246	12.436	45.192	34.282	1.00	26.05	O
ATOM	1884	CB	ASN A 246	9.871	44.360	34.472	1.00	26.89	C
ATOM	1885	CG	ASN A 246	9.545	45.770	34.958	1.00	30.93	C
ATOM	1886	OD1	ASN A 246	9.353	46.701	34.150	1.00	35.10	O
ATOM	1887	ND2	ASN A 246	9.493	45.943	36.281	1.00	35.04	N
ATOM	1888	N	PRO A 247	12.415	45.450	32.068	1.00	24.71	N
ATOM	1889	CA	PRO A 247	13.775	45.979	32.026	1.00	24.24	C
ATOM	1890	C	PRO A 247	13.909	47.352	32.684	1.00	24.48	C
ATOM	1891	O	PRO A 247	13.189	48.296	32.374	1.00	23.54	O
ATOM	1892	CB	PRO A 247	14.109	46.036	30.538	1.00	24.23	C
ATOM	1893	CG	PRO A 247	12.900	45.524	29.803	1.00	25.13	C
ATOM	1894	CD	PRO A 247	11.769	45.385	30.752	1.00	24.61	C
ATOM	1895	N	ASP A 248	14.867	47.437	33.593	1.00	24.04	N
ATOM	1896	CA	ASP A 248	15.140	48.656	34.285	1.00	24.53	C
ATOM	1897	C	ASP A 248	16.206	49.440	33.496	1.00	24.15	C
ATOM	1898	O	ASP A 248	17.410	49.221	33.629	1.00	23.11	O
ATOM	1899	CB	ASP A 248	15.609	48.312	35.689	1.00	24.75	C
ATOM	1900	CG	ASP A 248	15.731	49.512	36.554	1.00	26.08	C
ATOM	1901	OD1	ASP A 248	15.956	50.616	36.009	1.00	27.08	O
ATOM	1902	OD2	ASP A 248	15.623	49.439	37.797	1.00	30.33	O
ATOM	1903	N	TYR A 249	15.735	50.329	32.642	1.00	24.42	N
ATOM	1904	CA	TYR A 249	16.612	51.129	31.807	1.00	25.30	C
ATOM	1905	C	TYR A 249	17.462	52.136	32.589	1.00	26.13	O
ATOM	1906	O	TYR A 249	18.495	52.584	32.083	1.00	26.46	C
ATOM	1907	CB	TYR A 249	15.796	51.826	30.713	1.00	25.41	C
ATOM	1908	CG	TYR A 249	15.119	50.853	29.768	1.00	22.90	C
ATOM	1909	CD1	TYR A 249	15.844	49.873	29.130	1.00	22.91	C
ATOM	1910	CD2	TYR A 249	13.760	50.923	29.519	1.00	22.21	C
ATOM	1911	CE1	TYR A 249	15.238	48.964	28.271	1.00	22.19	C
ATOM	1912	CE2	TYR A 249	13.144	50.023	28.660	1.00	21.56	C
ATOM	1913	CZ	TYR A 249	13.895	49.044	28.046	1.00	21.23	O
ATOM	1914	OH	TYR A 249	13.304	48.163	27.173	1.00	23.38	N
ATOM	1915	N	GLU A 250	17.071	52.465	33.822	1.00	26.65	C
ATOM	1916	CA	GLU A 250	17.894	53.365	34.640	1.00	27.47	C
ATOM	1917	C	GLU A 250	19.161	52.651	35.086	1.00	26.52	O
ATOM	1918	O	GLU A 250	20.238	53.224	35.086	1.00	27.17	C
ATOM	1919	CB	GLU A 250	17.133	53.908	35.866	1.00	27.89	C
ATOM	1920	CG	GLU A 250	15.880	54.684	35.485	1.00	32.57	C
ATOM	1921	CD	GLU A 250	15.258	55.459	36.631	1.00	37.09	O
ATOM	1922	OE1	GLU A 250	15.809	55.491	37.753	1.00	42.28	O
ATOM	1923	OE2	GLU A 250	14.198	56.055	36.399	1.00	42.29	N
ATOM	1924	N	ARG A 251	19.042	51.399	35.490	1.00	25.57	C
ATOM	1925	CA	ARG A 251	20.224	50.657	35.900	1.00	24.72	C
ATOM	1926	C	ARG A 251	20.955	50.069	34.718	1.00	23.56	O
ATOM	1927	O	ARG A 251	22.150	49.919	34.769	1.00	22.92	C
ATOM	1928	CB	ARG A 251	19.845	49.520	36.845	1.00	25.64	C
ATOM	1929	CG	ARG A 251	19.435	49.957	38.255	1.00	26.79	C
ATOM	1930	CD	ARG A 251	18.858	48.815	39.123	1.00	30.01	N
ATOM	1931	NE	ARG A 251	19.900	47.875	39.540	1.00	31.06	C
ATOM	1932	CZ	ARG A 251	19.709	46.579	39.766	1.00	32.72	N
ATOM	1933	NH1	ARG A 251	18.508	46.029	39.628	1.00	33.10	N
ATOM	1934	NH2	ARG A 251	20.734	45.828	40.135	1.00	33.44	N
ATOM	1935	N	PHE A 252	20.234	49.725	33.652	1.00	22.66	C
ATOM	1936	CA	PHE A 252	20.826	49.019	32.532	1.00	21.99	C
ATOM	1937	C	PHE A 252	20.521	49.719	31.198	1.00	21.71	O
ATOM	1938	O	PHE A 252	19.900	49.160	30.289	1.00	21.32	C
ATOM	1939	CB	PHE A 252	20.261	47.610	32.519	1.00	22.03	C
ATOM	1940	CG	PHE A 252	20.292	46.915	33.868	1.00	21.75	C
ATOM	1941	CD1	PHE A 252	21.484	46.729	34.556	1.00	20.90	C
ATOM	1942	CD2	PHE A 252	19.124	46.402	34.423	1.00	21.94	C

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ATOM   1943  CE1 PHE A 252       21.506  46.040  35.785  1.00 20.51          C
ATOM   1944  CE2 PHE A 252       19.136  45.730  35.662  1.00 21.77          C
ATOM   1945  CZ  PHE A 252       20.320  45.553  36.333  1.00 21.41          C
ATOM   1946  N   PRO A 253       20.989  50.944  31.071  1.00 20.88          N
ATOM   1947  CA  PRO A 253       20.615  51.754  29.909  1.00 20.51          C
ATOM   1948  C   PRO A 253       20.956  51.077  28.578  1.00 20.47          C
ATOM   1949  O   PRO A 253       20.153  51.159  27.656  1.00 20.01          O
ATOM   1950  CB  PRO A 253       21.371  53.077  30.130  1.00 20.00          C
ATOM   1951  CG  PRO A 253       22.538  52.697  31.136  1.00 20.46          C
ATOM   1952  CD  PRO A 253       21.921  51.641  31.994  1.00 20.89          C
ATOM   1953  N   ASN A 254       22.088  50.393  28.455  1.00 20.68          N
ATOM   1954  CA  ASN A 254       22.401  49.805  27.160  1.00 20.72          C
ATOM   1955  C   ASN A 254       21.537  48.601  26.790  1.00 20.29          C
ATOM   1956  O   ASN A 254       21.644  48.068  25.688  1.00 20.03          O
ATOM   1957  CB  ASN A 254       23.882  49.463  27.033  1.00 20.89          C
ATOM   1958  CG  ASN A 254       24.736  50.698  26.899  1.00 22.24          C
ATOM   1959  OD1 ASN A 254       25.532  50.999  27.785  1.00 24.48          O
ATOM   1960  ND2 ASN A 254       24.557  51.446  25.791  1.00 22.23          N
ATOM   1961  N   PHE A 255       20.678  48.160  27.690  1.00 20.01          N
ATOM   1962  CA  PHE A 255       19.781  47.086  27.305  1.00 20.02          C
ATOM   1963  C   PHE A 255       18.855  47.599  26.185  1.00 20.33          C
ATOM   1964  O   PHE A 255       18.224  46.818  25.472  1.00 19.82          O
ATOM   1965  CB  PHE A 255       18.970  46.552  28.484  1.00 19.63          C
ATOM   1966  CG  PHE A 255       18.239  45.318  28.145  1.00 18.96          C
ATOM   1967  CD1 PHE A 255       18.928  44.149  27.930  1.00 19.50          C
ATOM   1968  CD2 PHE A 255       16.889  45.335  27.942  1.00 17.83          C
ATOM   1969  CE1 PHE A 255       18.267  42.997  27.575  1.00 20.08          C
ATOM   1970  CE2 PHE A 255       16.230  44.206  27.561  1.00 17.77          C
ATOM   1971  CZ  PHE A 255       16.912  43.036  27.381  1.00 21.57          C
ATOM   1972  N   GLN A 256       18.788  48.919  26.035  1.00 20.15          N
ATOM   1973  CA  GLN A 256       17.973  49.533  24.986  1.00 20.63          C
ATOM   1974  C   GLN A 256       18.594  49.343  23.591  1.00 20.12          C
ATOM   1975  O   GLN A 256       17.955  49.612  22.592  1.00 19.87          O
ATOM   1976  CB  GLN A 256       17.787  51.036  25.272  1.00 20.67          C
ATOM   1977  CG  GLN A 256       16.744  51.306  26.362  1.00 22.56          C
ATOM   1978  CD  GLN A 256       16.747  52.732  26.888  1.00 22.75          C
ATOM   1979  OE1 GLN A 256       15.727  53.420  26.816  1.00 24.69          O
ATOM   1980  NE2 GLN A 256       17.873  53.172  27.419  1.00 23.90          N
ATOM   1981  N   ASN A 257       19.850  48.915  23.553  1.00 20.07          N
ATOM   1982  CA  ASN A 257       20.583  48.700  22.310  1.00 20.66          C
ATOM   1983  C   ASN A 257       20.778  47.233  21.963  1.00 21.21          C
ATOM   1984  O   ASN A 257       21.446  46.921  20.979  1.00 21.28          O
ATOM   1985  CB  ASN A 257       21.975  49.300  22.420  1.00 20.31          C
ATOM   1986  CG  ASN A 257       21.937  50.757  22.776  1.00 20.83          C
ATOM   1987  OD1 ASN A 257       22.395  51.141  23.850  1.00 20.15          O
ATOM   1988  ND2 ASN A 257       21.366  51.577  21.889  1.00 16.99          N
ATOM   1989  N   VAL A 258       20.218  46.333  22.758  1.00 21.91          N
ATOM   1990  CA  VAL A 258       20.440  44.908  22.532  1.00 23.55          C
ATOM   1991  C   VAL A 258       19.720  44.400  21.284  1.00 24.29          C
ATOM   1992  O   VAL A 258       18.600  44.845  20.947  1.00 24.28          O
ATOM   1993  CB  VAL A 258       20.026  44.110  23.772  1.00 24.18          C
ATOM   1994  CG1 VAL A 258       18.529  43.868  23.785  1.00 23.69          C
ATOM   1995  CG2 VAL A 258       20.761  42.851  23.826  1.00 28.07          C
ATOM   1996  N   VAL A 259       20.381  43.506  20.562  1.00 24.48          N
ATOM   1997  CA  VAL A 259       19.787  42.922  19.364  1.00 25.21          C
ATOM   1998  C   VAL A 259       20.104  41.427  19.331  1.00 25.19          C
ATOM   1999  O   VAL A 259       21.260  41.046  19.333  1.00 25.58          O
ATOM   2000  CB  VAL A 259       20.345  43.551  18.094  1.00 25.37          C
ATOM   2001  CG1 VAL A 259       19.726  42.893  16.882  1.00 27.15          C
ATOM   2002  CG2 VAL A 259       20.074  45.059  18.066  1.00 25.97          C
ATOM   2003  N   GLY A 260       19.068  40.603  19.308  1.00 25.20          N
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ATOM   2004  CA   GLY A 260      19.214  39.161  19.312  1.00 25.52        C
ATOM   2005  C    GLY A 260      19.108  38.433  17.961  1.00 25.26        C
ATOM   2006  O    GLY A 260      18.762  39.016  16.914  1.00 24.66        O
ATOM   2007  N    TYR A 261      19.484  37.160  18.015  1.00 24.49        N
ATOM   2008  CA   TYR A 261      19.379  36.217  16.925  1.00 25.05        C
ATOM   2009  C    TYR A 261      18.435  35.145  17.475  1.00 24.39        C
ATOM   2010  O    TYR A 261      18.671  34.620  18.552  1.00 23.82        O
ATOM   2011  CB   TYR A 261      20.730  35.574  16.627  1.00 25.82        C
ATOM   2012  CG   TYR A 261      21.748  36.476  15.965  1.00 28.98        C
ATOM   2013  CD1  TYR A 261      21.804  36.598  14.585  1.00 35.41        C
ATOM   2014  CD2  TYR A 261      22.649  37.194  16.712  1.00 29.78        C
ATOM   2015  CE1  TYR A 261      22.737  37.429  13.976  1.00 35.73        C
ATOM   2016  CE2  TYR A 261      23.592  37.994  16.126  1.00 32.54        C
ATOM   2017  CZ   TYR A 261      23.643  38.116  14.768  1.00 35.98        C
ATOM   2018  OH   TYR A 261      24.580  38.959  14.202  1.00 38.02        O
ATOM   2019  N    GLU A 262      17.353  34.823  16.790  1.00 24.04        N
ATOM   2020  CA   GLU A 262      16.432  33.860  17.387  1.00 23.96        C
ATOM   2021  C    GLU A 262      15.992  32.773  16.435  1.00 23.90        C
ATOM   2022  O    GLU A 262      16.116  32.890  15.213  1.00 23.56        O
ATOM   2023  CB   GLU A 262      15.224  34.553  18.020  1.00 23.70        C
ATOM   2024  CG   GLU A 262      14.029  34.782  17.127  1.00 24.33        C
ATOM   2025  CD   GLU A 262      12.829  35.382  17.870  1.00 26.49        C
ATOM   2026  OE1  GLU A 262      12.753  36.611  18.029  1.00 27.38        O
ATOM   2027  OE2  GLU A 262      11.946  34.631  18.306  1.00 28.26        O
ATQM   2028  N    THR A 263      15.485  31.713  17.034  1.00 23.68        N
ATOM   2029  CA   THR A 263      14.974  30.605  16.279  1.00 24.40        C
ATOM   2030  C    THR A 263      14.091  29.786  17.193  1.00 24.29        C
ATOM   2031  O    THR A 263      14.131  29.936  18.423  1.00 24.53        O
ATOM   2032  CB   THR A 263      16.148  29.762  15.751  1.00 24.52        C
ATOM   2033  OG1  THR A 263      15.684  28.839  14.762  1.00 24.43        O
ATOM   2034  CG2  THR A 263      16.737  28.876  16.854  1.00 24.33        C
ATOM   2035  N    VAL A 264      13.263  28.954  16.593  1.00 23.62        N
ATOM   2036  CA   VAL A 264      12.500  28.019  17.370  1.00 24.01        C
ATOM   2037  C    VAL A 264      12.936  26.627  16.935  1.00 24.53        C
ATOM   2038  O    VAL A 264      12.879  26.291  15.768  1.00 24.27        O
ATOM   2039  CB   VAL A 264      11.008  28.194  17.177  1.00 24.69        C
ATOM   2040  CG1  VAL A 264      10.256  26.958  17.712  1.00 23.69        C
ATOM   2041  CG2  VAL A 264      10.520  29.526  17.857  1.00 23.81        C
ATOM   2042  N    VAL A 265      13.450  25.844  17.872  1.00 24.91        N
ATOM   2043  CA   VAL A 265      13.833  24.484  17.540  1.00 24.93        C
ATOM   2044  C    VAL A 265      12.792  23.470  17.967  1.00 24.20        C
ATOM   2045  O    VAL A 265      12.167  23.617  19.018  1.00 24.01        O
ATOM   2046  CB   VAL A 265      15.196  24.072  18.173  1.00 25.05        C
ATOM   2047  CG1  VAL A 265      16.291  24.884  17.557  1.00 26.38        C
ATOM   2048  CG2  VAL A 265      15.190  24.164  19.702  1.00 23.59        C
ATOM   2049  N    GLY A 266      12.641  22.439  17.144  1.00 23.26        N
ATOM   2050  CA   GLY A 266      11.776  21.316  17.451  1.00 23.22        C
ATOM   2051  C    GLY A 266      12.467  19.961  17.359  1.00 22.26        C
ATOM   2052  O    GLY A 266      13.661  19.872  17.131  1.00 22.37        O
ATOM   2053  N    PRO A 267      11.712  18.884  17.524  1.00 21.90        N
ATOM   2054  CA   PRO A 267      12.305  17.544  17.479  1.00 21.60        C
ATOM   2055  C    PRO A 267      13.206  17.355  16.280  1.00 20.82        C
ATOM   2056  O    PRO A 267      12.768  17.588  15.169  1.00 20.29        O
ATOM   2057  CB   PRO A 267      11.086  16.622  17.364  1.00 21.36        C
ATOM   2058  CG   PRO A 267      10.023  17.330  18.028  1.00 23.23        C
ATOM   2059  CD   PRO A 267      10.254  18.831  17.753  1.00 21.99        C
ATOM   2060  N    GLY A 268      14.445  16.938  16.496  1.00 20.81        N
ATOM   2061  CA   GLY A 268      15.340  16.674  15.383  1.00 20.31        C
ATOM   2062  C    GLY A 268      16.296  17.806  15.111  1.00 20.37        C
ATOM   2063  O    GLY A 268      17.333  17.605  14.476  1.00 21.79        O
ATOM   2064  N    ASP A 269      15.975  19.002  15.582  1.00 19.89        N
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ATOM	2065	CA	ASP A 269	16.849	20.141	15.364	1.00	19.78	C
ATOM	2066	C	ASP A 269	17.991	20.162	16.395	1.00	19.63	C
ATOM	2067	O	ASP A 269	17.829	19.729	17.551	1.00	18.28	O
ATOM	2068	CB	ASP A 269	16.069	21.436	15.532	1.00	20.34	C
ATOM	2069	CG	ASP A 269	14.976	21.636	14.500	1.00	20.66	C
ATOM	2070	OD1	ASP A 269	14.977	21.015	13.419	1.00	22.15	O
ATOM	2071	OD2	ASP A 269	14.072	22.454	14.703	1.00	23.30	O
ATOM	2072	N	VAL A 270	19.129	20.681	15.953	1.00	19.76	N
ATOM	2073	CA	VAL A 270	20.304	20.879	16.782	1.00	20.24	C
ATOM	2074	C	VAL A 270	20.793	22.318	16.601	1.00	19.84	C
ATOM	2075	O	VAL A 270	21.052	22.754	15.487	1.00	19.90	O
ATOM	2076	CB	VAL A 270	21.421	19.942	16.377	1.00	20.08	C
ATOM	2077	CG1	VAL A 270	22.676	20.288	17.121	1.00	21.38	C
ATOM	2078	CG2	VAL A 270	21.017	18.521	16.671	1.00	21.15	C
ATOM	2079	N	LEU A 271	20.885	23.056	17.699	1.00	19.86	N
ATOM	2080	CA	LEU A 271	21.341	24.427	17.656	1.00	20.03	C
ATOM	2081	C	LEU A 271	22.757	24.465	18.202	1.00	20.23	C
ATOM	2082	O	LEU A 271	23.032	23.946	19.276	1.00	19.73	O
ATOM	2083	CB	LEU A 271	20.429	25.328	18.465	1.00	20.59	C
ATOM	2084	CG	LEU A 271	20.934	26.742	18.724	1.00	20.93	C
ATOM	2085	CD1	LEU A 271	21.011	27.562	17.431	1.00	20.35	C
ATOM	2086	CD2	LEU A 271	20.039	27.428	19.728	1.00	22.31	C
ATOM	2087	N	TYR A 272	23.669	25.024	17.416	1.00	20.58	N
ATOM	2088	CA	TYR A 272	25.010	25.229	17.883	1.00	20.58	C
ATOM	2089	C	TYR A 272	24.985	26.535	18.653	1.00	20.69	C
ATOM	2090	O	TYR A 272	24.692	27.576	18.089	1.00	21.54	O
ATOM	2091	CB	TYR A 272	26.004	25.312	16.728	1.00	20.30	C
ATOM	2092	CG	TYR A 272	27.381	25.776	17.158	1.00	21.24	C
ATOM	2093	CD1	TYR A 272	27.997	25.250	18.275	1.00	21.70	C
ATOM	2094	CD2	TYR A 272	28.039	26.788	16.472	1.00	22.21	C
ATOM	2095	CE1	TYR A 272	29.232	25.692	18.674	1.00	21.69	C
ATOM	2096	CE2	TYR A 272	29.275	27.215	16.857	1.00	22.99	C
ATOM	2097	CZ	TYR A 272	29.868	26.672	17.961	1.00	22.01	C
ATOM	2098	OH	TYR A 272	31.109	27.111	18.352	1.00	22.77	O
ATOM	2099	N	ILE A 273	25.216	26.454	19.951	1.00	21.22	N
ATOM	2100	CA	ILE A 273	25.362	27.629	20.805	1.00	21.49	C
ATOM	2101	C	ILE A 273	26.852	27.809	21.117	1.00	22.00	C
ATOM	2102	O	ILE A 273	27.413	27.112	21.962	1.00	22.55	O
ATOM	2103	CB	ILE A 273	24.607	27.471	22.073	1.00	21.14	C
ATOM	2104	CG1	ILE A 273	23.148	27.132	21.776	1.00	21.68	C
ATOM	2105	CG2	ILE A 273	24.661	28.791	22.854	1.00	21.75	C
ATOM	2106	CD1	ILE A 273	22.318	26.972	23.026	1.00	21.44	C
ATOM	2107	N	PRO A 274	27.493	28.723	20.413	1.00	21.86	N
ATOM	2108	CA	PRO A 274	28.929	28.916	20.557	1.00	22.49	C
ATOM	2109	C	PRO A 274	29.278	29.462	21.926	1.00	22.77	C
ATOM	2110	O	PRO A 274	28.510	30.231	22.521	1.00	21.72	O
ATOM	2111	CB	PRO A 274	29.305	29.908	19.429	1.00	23.00	C
ATOM	2112	CG	PRO A 274	28.022	30.225	18.658	1.00	23.03	C
ATOM	2113	CD	PRO A 274	26.889	29.582	19.398	1.00	22.21	C
ATOM	2114	N	MET A 275	30.441	29.028	22.404	1.00	22.72	N
ATOM	2115	CA	MET A 275	30.962	29.403	23.702	1.00	23.40	C
ATOM	2116	C	MET A 275	30.949	30.921	23.864	1.00	22.42	C
ATOM	2117	O	MET A 275	31.282	31.636	22.937	1.00	20.73	O
ATOM	2118	CB	MET A 275	32.373	28.856	23.826	1.00	23.99	C
ATOM	2119	CG	MET A 275	32.933	28.944	25.203	1.00	28.99	C
ATOM	2120	SD	MET A 275	34.517	28.083	25.337	1.00	35.05	S
ATOM	2121	CE	MET A 275	35.287	28.525	23.832	1.00	31.30	C
ATOM	2122	N	TYR A 276	30.509	31.388	25.030	1.00	22.30	N
ATOM	2123	CA	TYR A 276	30.419	32.831	25.349	1.00	23.06	C
ATOM	2124	C	TYR A 276	29.221	33.543	24.752	1.00	22.11	C
ATOM	2125	O	TYR A 276	29.012	34.705	25.041	1.00	21.84	O

ATOM	2126	CB	TYR A 276	31.673	33.594	24.934	1.00	23.42	C
ATOM	2127	CG	TYR A 276	32.857	33.283	25.796	1.00	28.51	C
ATOM	2128	CD1	TYR A 276	32.969	33.799	27.072	1.00	33.00	C
ATOM	2129	CD2	TYR A 276	33.876	32.460	25.321	1.00	34.41	C
ATOM	2130	CE1	TYR A 276	34.066	33.490	27.877	1.00	36.36	C
ATOM	2131	CE2	TYR A 276	34.968	32.151	26.102	1.00	36.45	C
ATOM	2132	CZ	TYR A 276	35.059	32.651	27.371	1.00	37.63	C
ATOM	2133	OH	TYR A 276	36.192	32.314	28.077	1.00	40.88	O
ATOM	2134	N	TRP A 277	28.455	32.878	23.906	1.00	20.75	N
ATOM	2135	CA	TRP A 277	27.272	33.528	23.360	1.00	20.85	C
ATOM	2136	C	TRP A 277	26.173	33.482	24.372	1.00	20.33	C
ATOM	2137	O	TRP A 277	25.907	32.431	24.949	1.00	20.72	O
ATOM	2138	CB	TRP A 277	26.791	32.874	22.068	1.00	20.13	C
ATOM	2139	CG	TRP A 277	27.552	33.323	20.879	1.00	19.28	C
ATOM	2140	CD1	TRP A 277	28.887	33.175	20.673	1.00	21.27	C
ATOM	2141	CD2	TRP A 277	27.042	33.995	19.730	1.00	20.60	C
ATOM	2142	NE1	TRP A 277	29.246	33.721	19.467	1.00	21.05	N
ATOM	2143	CE2	TRP A 277	28.128	34.232	18.864	1.00	21.04	C
ATOM	2144	CE3	TRP A 277	25.780	34.456	19.352	1.00	21.08	C
ATOM	2145	CZ2	TRP A 277	27.989	34.893	17.643	1.00	20.38	C
ATOM	2146	CZ3	TRP A 277	25.641	35.110	18.122	1.00	20.48	C
ATOM	2147	CH2	TRP A 277	26.736	35.306	17.288	1.00	21.03	C
ATOM	2148	N	TRP A 278	25.572	34.632	24.629	1.00	19.39	N
ATOM	2149	CA	TRP A 278	24.430	34.711	25.521	1.00	19.80	C
ATOM	2150	C	TRP A 278	23.243	33.927	24.927	1.00	20.18	C
ATOM	2151	O	TRP A 278	23.019	33.939	23.732	1.00	21.04	O
ATOM	2152	CB	TRP A 278	23.989	36.168	25.646	1.00	20.39	C
ATOM	2153	CG	TRP A 278	24.979	37.031	26.300	1.00	21.20	C
ATOM	2154	CD1	TRP A 278	26.022	37.672	25.720	1.00	21.06	C
ATOM	2155	CD2	TRP A 278	25.056	37.301	27.691	1.00	20.38	C
ATOM	2156	NE1	TRP A 278	26.725	38.369	26.668	1.00	22.44	N
ATOM	2157	CE2	TRP A 278	26.139	38.155	27.891	1.00	21.86	C
ATOM	2158	CE3	TRP A 278	24.282	36.937	28.789	1.00	21.09	C
ATOM	2159	CZ2	TRP A 278	26.480	38.640	29.147	1.00	21.13	C
ATOM	2160	CZ3	TRP A 278	24.623	37.412	30.019	1.00	23.38	C
ATOM	2161	CH2	TRP A 278	25.704	38.258	30.194	1.00	21.06	C
ATOM	2162	N	HIS A 279	22.465	33.278	25.761	1.00	20.76	N
ATOM	2163	CA	HIS A 279	21.262	32.646	25.294	1.00	21.56	C
ATOM	2164	C	HIS A 279	20.198	32.659	26.361	1.00	21.24	C
ATOM	2165	O	HIS A 279	20.475	32.456	27.540	1.00	21.63	O
ATOM	2166	CB	HIS A 279	21.501	31.203	24.819	1.00	21.83	C
ATOM	2167	CG	HIS A 279	22.342	30.379	25.738	1.00	23.50	C
ATOM	2168	ND1	HIS A 279	23.713	30.494	25.785	1.00	24.98	N
ATOM	2169	CD2	HIS A 279	22.017	29.385	26.602	1.00	26.21	C
ATOM	2170	CE1	HIS A 279	24.200	29.599	26.628	1.00	26.46	C
ATOM	2171	NE2	HIS A 279	23.192	28.927	27.158	1.00	25.14	N
ATOM	2172	N	HIS A 280	18.994	32.900	25.874	1.00	21.71	N
ATOM	2173	CA	HIS A 280	17.736	32.956	26.602	1.00	21.78	C
ATOM	2174	C	HIS A 280	16.890	31.860	25.951	1.00	21.70	C
ATOM	2175	O	HIS A 280	16.722	31.846	24.736	1.00	21.40	O
ATOM	2176	CB	HIS A 280	17.104	34.322	26.374	1.00	21.20	C
ATOM	2177	CG	HIS A 280	15.642	34.367	26.626	1.00	21.64	C
ATOM	2178	ND1	HIS A 280	15.100	35.028	27.705	1.00	22.67	N
ATOM	2179	CD2	HIS A 280	14.600	33.826	25.951	1.00	23.33	C
ATOM	2180	CE1	HIS A 280	13.786	34.891	27.684	1.00	23.20	C
ATOM	2181	NE2	HIS A 280	13.457	34.158	26.635	1.00	23.30	N
ATOM	2182	N	ILE A 281	16.368	30.934	26.733	1.00	22.98	N
ATOM	2183	CA	ILE A 281	15.658	29.779	26.158	1.00	23.36	C
ATOM	2184	C	ILE A 281	14.313	29.606	26.800	1.00	23.58	C
ATOM	2185	O	ILE A 281	14.209	29.592	28.014	1.00	23.63	O
ATOM	2186	CB	ILE A 281	16.512	28.525	26.301	1.00	23.87	C

ATOM	2187	CG1	ILE	A	281	17.771	28.675	25.435	1.00	25.77	C
ATOM	2188	CG2	ILE	A	281	15.748	27.261	25.863	1.00	23.54	C
ATOM	2189	CD1	ILE	A	281	18.752	27.659	25.690	1.00	29.36	C
ATOM	2190	N	GLU	A	282	13.268	29.510	25.982	1.00	23.92	N
ATOM	2191	CA	GLU	A	282	11.923	29.337	26.525	1.00	24.26	C
ATOM	2192	C	GLU	A	282	11.113	28.234	25.834	1.00	23.82	C
ATOM	2193	O	GLU	A	282	11.115	28.107	24.606	1.00	24.00	O
ATOM	2194	CB	GLU	A	282	11.166	30.681	26.490	1.00	24.35	C
ATOM	2195	CG	GLU	A	282	10.887	31.249	25.112	1.00	25.59	C
ATOM	2196	CD	GLU	A	282	10.320	32.668	25.168	1.00	25.45	C
ATOM	2197	OE1	GLU	A	282	10.861	33.494	25.929	1.00	26.04	O
ATOM	2198	OE2	GLU	A	282	9.332	32.954	24.451	1.00	25.08	O
ATOM	2199	N	SER	A	283	10.460	27.419	26.648	1.00	23.28	N
ATOM	2200	CA	SER	A	283	9.573	26.373	26.166	1.00	23.66	C
ATOM	2201	C	SER	A	283	8.257	27.054	25.787	1.00	23.86	C
ATOM	2202	O	SER	A	283	7.678	27.780	26.593	1.00	23.20	O
ATOM	2203	CB	SER	A	283	9.341	25.321	27.247	1.00	23.36	C
ATOM	2204	OG	SER	A	283	10.473	24.497	27.401	1.00	23.30	O
ATOM	2205	N	LEU	A	284	7.792	26.837	24.564	1.00	24.56	N
ATOM	2206	CA	LEU	A	284	6.626	27.583	24.084	1.00	25.62	C
ATOM	2207	C	LEU	A	284	5.401	27.487	25.004	1.00	25.52	C
ATOM	2208	O	LEU	A	284	5.114	26.431	25.589	1.00	24.71	O
ATOM	2209	CB	LEU	A	284	6.237	27.157	22.680	1.00	25.64	C
ATOM	2210	CG	LEU	A	284	7.274	27.308	21.576	1.00	27.12	C
ATOM	2211	CD1	LEU	A	284	6.591	27.546	20.242	1.00	28.93	C
ATOM	2212	CD2	LEU	A	284	8.248	28.364	21.851	1.00	27.08	C
ATOM	2213	N	LEU	A	285	4.713	28.615	25.144	1.00	25.85	N
ATOM	2214	CA	LEU	A	285	3.490	28.676	25.942	1.00	26.84	C
ATOM	2215	C	LEU	A	285	2.507	27.691	25.345	1.00	27.10	C
ATOM	2216	O	LEU	A	285	2.424	27.565	24.139	1.00	27.10	O
ATOM	2217	CB	LEU	A	285	2.875	30.071	25.906	1.00	26.48	C
ATOM	2218	CG	LEU	A	285	3.709	31.225	26.438	1.00	27.70	C
ATOM	2219	CD1	LEU	A	285	3.075	32.554	26.026	1.00	28.22	C
ATOM	2220	CD2	LEU	A	285	3.845	31.125	27.928	1.00	28.39	C
ATOM	2221	N	ASN	A	286	1.779	26.987	26.196	1.00	27.81	N
ATOM	2222	CA	ASN	A	286	0.790	26.007	25.753	1.00	28.27	C
ATOM	2223	C	ASN	A	286	1.313	24.977	24.744	1.00	27.42	C
ATOM	2224	O	ASN	A	286	0.555	24.481	23.922	1.00	26.50	O
ATOM	2225	CB	ASN	A	286	−0.417	26.741	25.160	1.00	29.08	C
ATOM	2226	CG	ASN	A	286	−0.931	27.846	26.078	1.00	32.15	C
ATOM	2227	OD1	ASN	A	286	−1.484	27.577	27.154	1.00	34.93	O
ATOM	2228	ND2	ASN	A	286	−0.725	29.099	25.670	1.00	35.91	N
ATOM	2229	N	GLY	A	287	2.608	24.672	24.799	1.00	26.54	N
ATOM	2230	CA	GLY	A	287	3.201	23.727	23.879	1.00	25.64	C
ATOM	2231	C	GLY	A	287	3.474	22.371	24.497	1.00	25.01	C
ATOM	2232	O	GLY	A	287	4.031	21.502	23.829	1.00	24.77	O
ATOM	2233	N	GLY	A	288	3.110	22.187	25.766	1.00	24.43	N
ATOM	2234	CA	GLY	A	288	3.357	20.922	26.455	1.00	23.99	C
ATOM	2235	C	GLY	A	288	4.804	20.844	26.935	1.00	24.11	C
ATOM	2236	O	GLY	A	288	5.546	21.810	26.786	1.00	22.82	O
ATOM	2237	N	ILE	A	289	5.211	19.695	27.472	1.00	23.99	N
ATOM	2238	CA	ILE	A	289	6.550	19.522	28.000	1.00	24.69	C
ATOM	2239	C	ILE	A	289	7.605	19.496	26.908	1.00	24.25	C
ATOM	2240	O	ILE	A	289	7.350	19.092	25.774	1.00	25.20	O
ATOM	2241	CB	ILE	A	289	6.691	18.234	28.836	1.00	25.39	C
ATOM	2242	CG1	ILE	A	289	6.702	17.006	27.941	1.00	27.43	C
ATOM	2243	CG2	ILE	A	289	5.613	18.151	29.921	1.00	26.30	C
ATOM	2244	CD1	ILE	A	289	7.255	15.752	28.650	1.00	30.57	C
ATOM	2245	N	THR	A	290	8.808	19.912	27.267	1.00	23.28	N
ATOM	2246	CA	THR	A	290	9.908	19.908	26.334	1.00	22.12	C
ATOM	2247	C	THR	A	290	11.008	18.984	26.824	1.00	21.52	C

ATOM	2248	O	THR A 290	11.193	18.789	28.029	1.00	20.85		O
ATOM	2249	CB	THR A 290	10.473	21.318	26.168	1.00	22.19		C
ATOM	2250	OG1	THR A 290	10.758	21.885	27.444	1.00	21.69		O
ATOM	2251	CG2	THR A 290	9.436	22.268	25.557	1.00	23.05		C
ATOM	2252	N	ILE A 291	11.746	18.421	25.880	1.00	20.44		N
ATOM	2253	CA	ILE A 291	12.880	17.616	26.234	1.00	21.24		C
ATOM	2254	C	ILE A 291	14.033	17.981	25.347	1.00	20.47		C
ATOM	2255	O	ILE A 291	13.869	18.064	24.137	1.00	21.04		O
ATOM	2256	CB	ILE A 291	12.559	16.118	26.078	1.00	21.40		C
ATOM	2257	CG1	ILE A 291	11.405	15.724	27.004	1.00	22.31		C
ATOM	2258	CG2	ILE A 291	13.798	15.310	26.383	1.00	22.63		C
ATOM	2259	CD1	ILE A 291	10.969	14.262	26.867	1.00	23.92		C
ATOM	2260	N	THR A 292	15.194	18.188	25.953	1.00	20.24		N
ATOM	2261	CA	THR A 292	16.395	18.517	25.236	1.00	20.13		C
ATOM	2262	C	THR A 292	17.560	17.794	25.831	1.00	20.29		C
ATOM	2263	O	THR A 292	17.605	17.557	27.021	1.00	20.94		O
ATOM	2264	CB	THR A 292	16.688	20.044	25.365	1.00	20.34		C
ATOM	2265	OG1	THR A 292	15.524	20.799	25.022	1.00	19.08		O
ATOM	2266	CG2	THR A 292	17.730	20.487	24.355	1.00	20.32		C
ATOM	2267	N	VAL A 293	18.530	17.454	25.003	1.00	20.52		N
ATOM	2268	CA	VAL A 293	19.784	16.939	25.516	1.00	20.48		C
ATOM	2269	C	VAL A 293	20.892	17.803	24.918	1.00	20.80		C
ATOM	2270	O	VAL A 293	20.936	17.954	23.709	1.00	19.58		O
ATOM	2271	CB	VAL A 293	19.995	15.483	25.129	1.00	20.78		C
ATOM	2272	CG1	VAL A 293	21.436	15.068	25.385	1.00	20.33		C
ATOM	2273	CG2	VAL A 293	19.047	14.597	25.919	1.00	20.95		C
ATOM	2274	N	ASN A 294	21.749	18.412	25.752	1.00	21.34		N
ATOM	2275	CA	ASN A 294	22.855	19.192	25.205	1.00	22.04		C
ATOM	2276	C	ASN A 294	24.144	18.362	25.204	1.00	22.29		C
ATOM	2277	O	ASN A 294	24.182	17.241	25.720	1.00	23.22		O
ATOM	2278	CB	ASN A 294	23.012	20.581	25.883	1.00	22.35		C
ATOM	2279	CG	ASN A 294	23.703	20.520	27.259	1.00	23.08		C
ATOM	2280	OD1	ASN A 294	24.240	19.493	27.628	1.00	22.91		O
ATOM	2281	ND2	ASN A 294	23.657	21.640	28.027	1.00	21.75		N
ATOM	2282	N	PHE A 295	25.168	18.903	24.565	1.00	22.27		N
ATOM	2283	CA	PHE A 295	26.467	18.269	24.452	1.00	22.31		C
ATOM	2284	C	PHE A 295	27.444	19.408	24.704	1.00	22.66		C
ATOM	2285	O	PHE A 295	27.602	20.299	23.865	1.00	23.12		O
ATOM	2286	CB	PHE A 295	26.709	17.748	23.040	1.00	22.32		C
ATOM	2287	CG	PHE A 295	25.871	16.568	22.653	1.00	22.18		C
ATOM	2288	CD1	PHE A 295	24.494	16.689	22.477	1.00	22.38		C
ATOM	2289	CD2	PHE A 295	26.465	15.336	22.441	1.00	21.44		C
ATOM	2290	CE1	PHE A 295	23.757	15.604	22.111	1.00	24.06		C
ATOM	2291	CE2	PHE A 295	25.718	14.248	22.064	1.00	19.77		C
ATOM	2292	CZ	PHE A 295	24.380	14.366	21.911	1.00	21.39		C
ATOM	2293	N	TRP A 296	28.062	19.403	25.869	1.00	22.66		N
ATOM	2294	CA	TRP A 296	28.998	20.450	26.256	1.00	23.09		C
ATOM	2295	C	TRP A 296	30.454	19.991	26.081	1.00	23.22		C
ATOM	2296	O	TRP A 296	30.865	18.932	26.595	1.00	22.78		O
ATOM	2297	CB	TRP A 296	28.734	20.834	27.707	1.00	22.89		C
ATOM	2298	CG	TRP A 296	27.830	22.013	27.906	1.00	23.61		C
ATOM	2299	CD1	TRP A 296	27.783	23.129	27.149	1.00	25.47		C
ATOM	2300	CD2	TRP A 296	26.894	22.219	28.975	1.00	24.55		C
ATOM	2301	NE1	TRP A 296	26.874	24.018	27.667	1.00	25.25		N
ATOM	2302	CE2	TRP A 296	26.308	23.478	28.783	1.00	24.33		C
ATOM	2303	CE3	TRP A 296	26.464	21.444	30.061	1.00	27.49		C
ATOM	2304	CZ2	TRP A 296	25.335	23.994	29.631	1.00	25.91		C
ATOM	2305	CZ3	TRP A 296	25.474	21.952	30.899	1.00	27.19		C
ATOM	2306	CH2	TRP A 296	24.935	23.224	30.682	1.00	26.96		C
ATOM	2307	N	TYR A 297	31.216	20.783	25.337	1.00	23.29		N
ATOM	2308	CA	TYR A 297	32.627	20.510	25.100	1.00	23.80		C

ATOM	2309	C	TYR A 297	33.506	21.660	25.554	1.00 24.51	C
ATOM	2310	O	TYR A 297	33.188	22.825	25.323	1.00 23.73	O
ATOM	2311	CB	TYR A 297	32.882	20.332	23.610	1.00 23.38	C
ATOM	2312	CG	TYR A 297	32.284	19.092	23.021	1.00 23.42	C
ATOM	2313	CD1	TYR A 297	30.940	19.053	22.641	1.00 23.90	C
ATOM	2314	CD2	TYR A 297	33.056	17.971	22.808	1.00 21.43	C
ATOM	2315	CE1	TYR A 297	30.394	17.920	22.089	1.00 23.32	C
ATOM	2316	CE2	TYR A 297	32.515	16.826	22.250	1.00 22.05	C
ATOM	2317	CZ	TYR A 297	31.186	16.806	21.905	1.00 21.88	C
ATOM	2318	OH	TYR A 297	30.644	15.669	21.365	1.00 21.30	O
ATOM	2319	N	LYS A 298	34.637	21.334	26.160	1.00 25.35	N
ATOM	2320	CA	LYS A 298	35.589	22.362	26.536	1.00 26.48	C
ATOM	2321	C	LYS A 298	36.070	23.017	25.268	1.00 26.23	C
ATOM	2322	O	LYS A 298	36.224	22.364	24.249	1.00 24.85	O
ATOM	2323	CB	LYS A 298	36.783	21.771	27.308	1.00 27.15	C
ATOM	2324	CG	LYS A 298	36.474	21.471	28.777	1.00 30.00	C
ATOM	2325	CD	LYS A 298	37.666	20.901	29.550	1.00 33.20	C
ATOM	2326	CE	LYS A 298	37.232	20.493	30.969	1.00 36.09	C
ATOM	2327	NZ	LYS A 298	38.299	19.766	31.764	1.00 39.03	N
ATOM	2328	N	GLY A 299	36.321	24.313	25.329	1.00 27.13	N
ATOM	2329	CA	GLY A 299	36.798	25.014	24.159	1.00 28.27	C
ATOM	2330	C	GLY A 299	38.229	24.649	23.837	1.00 29.23	C
ATOM	2331	O	GLY A 299	38.892	24.005	24.613	1.00 28.19	O
ATOM	2332	N	ALA A 300	38.674	25.046	22.660	1.00 31.78	N
ATOM	2333	CA	ALA A 300	40.046	24.852	22.233	1.00 34.32	C
ATOM	2334	C	ALA A 300	40.992	25.610	23.155	1.00 36.37	C
ATOM	2335	O	ALA A 300	40.573	26.430	23.956	1.00 35.96	O
ATOM	2336	CB	ALA A 300	40.210	25.355	20.806	1.00 34.38	C
ATOM	2337	N	PRO A 301	42.280	25.349	23.025	1.00 39.70	N
ATOM	2338	CA	PRO A 301	43.278	26.051	23.845	1.00 41.64	C
ATOM	2339	C	PRO A 301	43.465	27.482	23.386	1.00 43.35	C
ATOM	2340	O	PRO A 301	43.220	27.803	22.228	1.00 43.86	O
ATOM	2341	CB	PRO A 301	44.566	25.275	23.572	1.00 41.46	C
ATOM	2342	CG	PRO A 301	44.382	24.736	22.199	1.00 41.25	C
ATOM	2343	CD	PRO A 301	42.906	24.416	22.068	1.00 40.04	C
ATOM	2344	N	THR A 302	43.900	28.328	24.300	1.00 45.97	N
ATOM	2345	CA	THR A 302	44.214	29.715	24.001	1.00 47.77	C
ATOM	2346	C	THR A 302	45.593	29.713	23.362	1.00 48.92	C
ATOM	2347	O	THR A 302	46.532	29.251	24.006	1.00 49.23	O
ATOM	2348	CB	THR A 302	44.282	30.469	25.322	1.00 48.10	C
ATOM	2349	OG1	THR A 302	43.006	30.416	25.976	1.00 49.37	O
ATOM	2350	CG2	THR A 302	44.520	31.924	25.100	1.00 48.91	C
ATOM	2351	N	PRO A 303	45.761	30.248	22.148	1.00 50.22	N
ATOM	2352	CA	PRO A 303	47.064	30.150	21.474	1.00 50.62	C
ATOM	2353	C	PRO A 303	48.191	30.728	22.316	1.00 50.64	C
ATOM	2354	O	PRO A 303	47.883	31.390	23.307	1.00 50.98	O
ATOM	2355	CB	PRO A 303	46.877	30.986	20.202	1.00 50.93	C
ATOM	2356	CG	PRO A 303	45.407	30.999	19.968	1.00 50.70	C
ATOM	2357	CD	PRO A 303	44.814	31.064	21.360	1.00 50.45	C
ATOM	2358	N	GLU A 307	46.978	37.074	18.830	1.00 53.59	N
ATOM	2359	CA	GLU A 307	46.946	38.016	17.714	1.00 53.82	C
ATOM	2360	C	GLU A 307	45.902	39.090	17.922	1.00 52.97	C
ATOM	2361	O	GLU A 307	44.792	38.810	18.358	1.00 53.64	O
ATOM	2362	CB	GLU A 307	46.672	37.308	16.371	1.00 54.37	C
ATOM	2363	CG	GLU A 307	46.875	38.231	15.159	1.00 56.16	C
ATOM	2364	CD	GLU A 307	46.966	37.504	13.822	1.00 57.96	C
ATOM	2365	OE1	GLU A 307	46.621	36.303	13.738	1.00 59.31	O
ATOM	2366	OE2	GLU A 307	47.388	38.150	12.839	1.00 59.69	O
ATOM	2367	N	TYR A 308	46.267	40.324	17.610	1.00 51.95	N
ATOM	2368	CA	TYR A 308	45.343	41.436	17.702	1.00 51.19	C
ATOM	2369	C	TYR A 308	44.693	41.603	16.337	1.00 50.27	C

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ATOM   2370   O    TYR A 308      45.246  41.146  15.331  1.00 50.45      O
ATOM   2371   CB   TYR A 308      46.083  42.684  18.162  1.00 51.43      C
ATOM   2372   CG   TYR A 308      46.675  42.460  19.532  1.00 52.65      C
ATOM   2373   CD1  TYR A 308      45.925  42.712  20.674  1.00 52.95      C
ATOM   2374   CD2  TYR A 308      47.948  41.912  19.685  1.00 53.42      C
ATOM   2375   CE1  TYR A 308      46.435  42.472  21.925  1.00 54.01      C
ATOM   2376   CE2  TYR A 308      48.467  41.662  20.937  1.00 54.33      C
ATOM   2377   CZ   TYR A 308      47.703  41.949  22.058  1.00 54.84      C
ATOM   2378   OH   TYR A 308      48.189  41.714  23.323  1.00 56.45      O
ATOM   2379   N    PRO A 309      43.496  42.186  16.290  1.00 48.69      N
ATOM   2380   CA   PRO A 309      42.789  42.696  17.474  1.00 47.07      C
ATOM   2381   C    PRO A 309      42.127  41.586  18.280  1.00 44.55      C
ATOM   2382   O    PRO A 309      41.782  40.555  17.728  1.00 45.01      O
ATOM   2383   CB   PRO A 309      41.720  43.606  16.869  1.00 47.45      C
ATOM   2384   CG   PRO A 309      41.420  42.978  15.508  1.00 48.43      C
ATOM   2385   CD   PRO A 309      42.701  42.336  15.056  1.00 48.78      C
ATOM   2386   N    LEU A 310      41.967  41.790  19.577  1.00 41.78      N
ATOM   2387   CA   LEU A 310      41.344  40.781  20.427  1.00 39.59      C
ATOM   2388   C    LEU A 310      39.858  40.652  20.133  1.00 37.52      C
ATOM   2389   O    LEU A 310      39.171  41.655  19.923  1.00 38.11      O
ATOM   2390   CB   LEU A 310      41.499  41.174  21.893  1.00 39.43      C
ATOM   2391   CG   LEU A 310      42.527  40.468  22.784  1.00 38.86      C
ATOM   2392   CD1  LEU A 310      43.799  40.123  22.092  1.00 37.07      C
ATOM   2393   CD2  LEU A 310      42.799  41.326  24.000  1.00 38.37      C
ATOM   2394   N    LYS A 311      39.361  39.425  20.141  1.00 34.45      N
ATOM   2395   CA   LYS A 311      37.932  39.180  20.001  1.00 32.51      C
ATOM   2396   C    LYS A 311      37.144  39.537  21.257  1.00 30.59      C
ATOM   2397   O    LYS A 311      37.675  39.546  22.375  1.00 28.88      O
ATOM   2398   CB   LYS A 311      37.674  37.736  19.652  1.00 32.87      C
ATOM   2399   N    ALA A 312      35.853  39.786  21.057  1.00 28.39      N
ATOM   2400   CA   ALA A 312      34.991  40.141  22.155  1.00 27.14      C
ATOM   2401   C    ALA A 312      35.110  39.121  23.260  1.00 26.12      C
ATOM   2402   O    ALA A 312      35.274  39.509  24.411  1.00 24.47      O
ATOM   2403   CB   ALA A 312      33.552  40.323  21.710  1.00 26.63      C
ATOM   2404   N    HIS A 313      35.126  37.830  22.910  1.00 25.90      N
ATOM   2405   CA   HIS A 313      35.106  36.796  23.932  1.00 25.82      C
ATOM   2406   C    HIS A 313      36.411  36.749  24.690  1.00 25.03      C
ATOM   2407   O    HIS A 313      36.447  36.323  25.825  1.00 24.89      O
ATOM   2408   CB   HIS A 313      34.724  35.406  23.368  1.00 27.19      C
ATOM   2409   CG   HIS A 313      35.788  34.773  22.535  1.00 29.47      C
ATOM   2410   ND1  HIS A 313      35.963  35.078  21.198  1.00 34.94      N
ATOM   2411   CD2  HIS A 313      36.753  33.880  22.847  1.00 33.69      C
ATOM   2412   CE1  HIS A 313      37.006  34.411  20.730  1.00 35.11      C
ATOM   2413   NE2  HIS A 313      37.495  33.665  21.705  1.00 35.57      N
ATOM   2414   N    GLN A 314      37.491  37.185  24.072  1.00 24.60      N
ATOM   2415   CA   GLN A 314      38.764  37.226  24.753  1.00 24.57      C
ATOM   2416   C    GLN A 314      38.776  38.352  25.813  1.00 24.74      C
ATOM   2417   O    GLN A 314      39.371  38.201  26.881  1.00 24.48      O
ATOM   2418   CB   GLN A 314      39.898  37.420  23.745  1.00 24.79      C
ATOM   2419   CG   GLN A 314      40.067  36.241  22.794  1.00 26.08      C
ATOM   2420   CD   GLN A 314      41.109  36.488  21.730  1.00 27.10      C
ATOM   2421   OE1  GLN A 314      41.013  37.450  20.949  1.00 27.68      O
ATOM   2422   NE2  GLN A 314      42.123  35.629  21.699  1.00 29.52      N
ATOM   2423   N    LYS A 315      38.115  39.462  25.506  1.00 23.99      N
ATOM   2424   CA   LYS A 315      37.983  40.545  26.454  1.00 24.95      C
ATOM   2425   C    LYS A 315      37.099  40.114  27.622  1.00 24.32      C
ATOM   2426   O    LYS A 315      37.345  40.491  28.765  1.00 22.87      O
ATOM   2427   CB   LYS A 315      37.408  41.783  25.785  1.00 25.11      C
ATOM   2428   CG   LYS A 315      38.403  42.449  24.874  1.00 29.28      C
ATOM   2429   CD   LYS A 315      37.821  43.693  24.226  1.00 34.17      C
ATOM   2430   CE   LYS A 315      38.844  44.360  23.332  1.00 37.47      C
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ATOM   2431  NZ   LYS A 315      38.206  45.270  22.318  1.00 41.38      N
ATOM   2432  N    VAL A 316      36.079  39.314  27.330  1.00 23.78      N
ATOM   2433  CA   VAL A 316      35.258  38.796  28.396  1.00 23.67      C
ATOM   2434  C    VAL A 316      36.138  37.937  29.329  1.00 23.61      C
ATOM   2435  O    VAL A 316      36.094  38.075  30.558  1.00 22.63      O
ATOM   2436  CB   VAL A 316      34.092  37.961  27.873  1.00 23.67      C
ATOM   2437  CG1  VAL A 316      33.315  37.370  29.037  1.00 23.53      C
ATOM   2438  CG2  VAL A 316      33.159  38.816  27.005  1.00 23.69      C
ATOM   2439  N    ALA A 317      36.940  37.065  28.732  1.00 22.51      N
ATOM   2440  CA   ALA A 317      37.834  36.207  29.507  1.00 22.28      C
ATOM   2441  C    ALA A 317      38.730  37.067  30.391  1.00 21.32      C
ATOM   2442  O    ALA A 317      38.926  36.783  31.556  1.00 21.45      O
ATOM   2443  CB   ALA A 317      38.680  35.325  28.574  1.00 21.87      C
ATOM   2444  N    ILE A 318      39.220  38.153  29.834  1.00 20.92      N
ATOM   2445  CA   ILE A 318      40.091  39.053  30.574  1.00 21.36      C
ATOM   2446  C    ILE A 318      39.375  39.662  31.784  1.00 21.54      C
ATOM   2447  O    ILE A 318      39.930  39.697  32.895  1.00 20.69      O
ATOM   2448  CB   ILE A 318      40.650  40.153  29.646  1.00 21.19      C
ATOM   2449  CG1  ILE A 318      41.664  39.560  28.670  1.00 21.41      C
ATOM   2450  CG2  ILE A 318      41.315  41.267  30.461  1.00 21.05      C
ATOM   2451  CD1  ILE A 318      42.217  40.569  27.663  1.00 21.73      C
ATOM   2452  N    MET A 319      38.146  40.122  31.569  1.00 21.31      N
ATOM   2453  CA   MET A 319      37.400  40.774  32.632  1.00 21.99      C
ATOM   2454  C    MET A 319      37.094  39.787  33.748  1.00 22.21      C
ATOM   2455  O    MET A 319      37.219  40.114  34.937  1.00 23.25      O
ATOM   2456  CB   MET A 319      36.133  41.446  32.108  1.00 21.66      C
ATOM   2457  CG   MET A 319      36.369  42.703  31.233  1.00 21.49      C
ATOM   2458  SD   MET A 319      34.787  43.525  30.787  1.00 23.05      S
ATOM   2459  CE   MET A 319      34.192  42.395  29.453  1.00 22.63      C
ATOM   2460  N    ARG A 320      36.736  38.568  33.379  1.00 21.99      N
ATOM   2461  CA   ARG A 320      36.492  37.544  34.383  1.00 21.57      C
ATOM   2462  C    ARG A 320      37.750  37.319  35.223  1.00 21.22      C
ATOM   2463  O    ARG A 320      37.669  37.210  36.439  1.00 21.65      O
ATOM   2464  CB   ARG A 320      36.083  36.237  33.726  1.00 20.79      C
ATOM   2465  CG   ARG A 320      34.702  36.243  33.014  1.00 22.36      C
ATOM   2466  CD   ARG A 320      34.300  34.857  32.452  1.00 21.24      C
ATOM   2467  NE   ARG A 320      34.147  33.910  33.558  1.00 21.37      N
ATOM   2468  CZ   ARG A 320      33.148  33.957  34.423  1.00 21.73      C
ATOM   2469  NH1  ARG A 320      32.196  34.869  34.308  1.00 22.69      N
ATOM   2470  NH2  ARG A 320      33.100  33.109  35.425  1.00 23.33      N
ATOM   2471  N    ASN A 321      38.908  37.216  34.571  1.00 21.35      N
ATOM   2472  CA   ASN A 321      40.159  36.947  35.282  1.00 21.20      C
ATOM   2473  C    ASN A 321      40.510  38.078  36.239  1.00 21.02      C
ATOM   2474  O    ASN A 321      40.958  37.828  37.364  1.00 21.80      O
ATOM   2475  CB   ASN A 321      41.314  36.648  34.311  1.00 21.07      C
ATOM   2476  CG   ASN A 321      41.263  35.209  33.752  1.00 22.81      C
ATOM   2477  OD1  ASN A 321      40.821  34.306  34.431  1.00 23.88      O
ATOM   2478  ND2  ASN A 321      41.713  35.018  32.521  1.00 20.59      N
ATOM   2479  N    ILE A 322      40.336  39.320  35.802  1.00 20.31      N
ATOM   2480  CA   ILE A 322      40.611  40.447  36.683  1.00 19.83      C
ATOM   2481  C    ILE A 322      39.721  40.344  37.918  1.00 19.45      C
ATOM   2482  O    ILE A 322      40.178  40.531  39.037  1.00 18.04      O
ATOM   2483  CB   ILE A 322      40.327  41.775  35.980  1.00 20.01      C
ATOM   2484  CG1  ILE A 322      41.320  42.009  34.849  1.00 21.62      C
ATOM   2485  CG2  ILE A 322      40.351  42.930  36.989  1.00 20.64      C
ATOM   2486  CD1  ILE A 322      42.782  41.987  35.278  1.00 23.99      C
ATOM   2487  N    GLU A 323      38.444  40.035  37.716  1.00 18.87      N
ATOM   2488  CA   GLU A 323      37.533  39.940  38.841  1.00 19.15      C
ATOM   2489  C    GLU A 323      37.964  38.845  39.781  1.00 19.09      C
ATOM   2490  O    GLU A 323      37.997  39.044  40.980  1.00 19.36      O
ATOM   2491  CB   GLU A 323      36.095  39.721  38.366  1.00 19.19      C
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ATOM	2492	CG	GLU	A	323	35.478	40.987	37.787	1.00	19.24	C
ATOM	2493	CD	GLU	A	323	34.096	40.764	37.189	1.00	17.51	C
ATOM	2494	OE1	GLU	A	323	33.140	40.470	37.922	1.00	17.44	O
ATOM	2495	OE2	GLU	A	323	33.982	40.901	35.974	1.00	16.60	O
ATOM	2496	N	LYS	A	324	38.357	37.711	39.227	1.00	19.47	N
ATOM	2497	CA	LYS	A	324	38.781	36.570	40.037	1.00	20.33	C
ATOM	2498	C	LYS	A	324	40.040	36.869	40.839	1.00	20.67	C
ATOM	2499	O	LYS	A	324	40.090	36.562	42.023	1.00	20.56	O
ATOM	2500	CB	LYS	A	324	39.040	35.334	39.172	1.00	20.11	C
ATOM	2501	CG	LYS	A	324	37.803	34.678	38.572	1.00	20.73	C
ATOM	2502	CD	LYS	A	324	38.238	33.413	37.761	1.00	21.68	C
ATOM	2503	CE	LYS	A	324	37.117	32.866	36.857	1.00	22.30	C
ATOM	2504	NZ	LYS	A	324	37.534	31.609	36.153	1.00	19.72	N
ATOM	2505	N	MET	A	325	41.045	37.456	40.194	1.00	21.37	N
ATOM	2506	CA	MET	A	325	42.305	37.782	40.860	1.00	22.78	C
ATOM	2507	C	MET	A	325	42.106	38.789	41.990	1.00	22.78	C
ATOM	2508	O	MET	A	325	42.734	38.694	43.047	1.00	22.48	O
ATOM	2509	CB	MET	A	325	43.308	38.369	39.865	1.00	27.30	C
ATOM	2510	CG	MET	A	325	43.964	37.359	38.978	1.00	27.30	C
ATOM	2511	SD	MET	A	325	44.699	38.147	37.511	1.00	35.72	S
ATOM	2512	CE	MET	A	325	45.804	39.221	38.338	1.00	36.16	C
ATOM	2513	N	LEU	A	326	41.248	39.765	41.752	1.00	23.21	N
ATOM	2514	CA	LEU	A	326	40.977	40.795	42.751	1.00	24.47	C
ATOM	2515	C	LEU	A	326	40.307	40.195	43.969	1.00	24.48	C
ATOM	2516	O	LEU	A	326	40.659	40.500	45.083	1.00	24.21	O
ATOM	2517	CB	LEU	A	326	40.087	41.863	42.159	1.00	24.63	C
ATOM	2518	CG	LEU	A	326	40.618	43.282	41.988	1.00	27.80	C
ATOM	2519	CD1	LEU	A	326	42.135	43.441	42.036	1.00	28.29	C
ATOM	2520	CD2	LEU	A	326	40.038	43.820	40.682	1.00	28.01	C
ATOM	2521	N	GLY	A	327	39.350	39.314	43.726	1.00	25.29	N
ATOM	2522	CA	GLY	A	327	38.663	38.608	44.782	1.00	25.73	C
ATOM	2523	C	GLY	A	327	39.644	37.854	45.638	1.00	25.86	C
ATOM	2524	O	GLY	A	327	39.597	37.931	46.863	1.00	25.83	O
ATOM	2525	N	GLU	A	328	40.556	37.137	45.002	1.00	26.02	N
ATOM	2526	CA	GLU	A	328	41.558	36.397	45.762	1.00	26.93	C
ATOM	2527	C	GLU	A	328	42.557	37.306	46.480	1.00	25.70	C
ATOM	2528	O	GLU	A	328	42.883	37.070	47.635	1.00	24.67	O
ATOM	2529	CB	GLU	A	328	42.293	35.423	44.853	1.00	27.76	C
ATOM	2530	CG	GLU	A	328	41.403	34.282	44.375	1.00	31.57	C
ATOM	2531	CD	GLU	A	328	41.635	32.992	45.146	1.00	37.39	C
ATOM	2532	OE1	GLU	A	328	42.048	33.058	46.335	1.00	41.34	O
ATOM	2533	OE2	GLU	A	328	41.430	31.902	44.552	1.00	42.69	O
ATOM	2534	N	ALA	A	329	43.024	38.356	45.816	1.00	25.20	N
ATOM	2535	CA	ALA	A	329	44.031	39.219	46.433	1.00	25.42	C
ATOM	2536	C	ALA	A	329	43.475	40.039	47.582	1.00	25.67	C
ATOM	2537	O	ALA	A	329	44.141	40.247	48.570	1.00	25.92	O
ATOM	2538	CB	ALA	A	329	44.670	40.109	45.409	1.00	25.31	C
ATOM	2539	N	LEU	A	330	42.241	40.496	47.467	1.00	26.51	N
ATOM	2540	CA	LEU	A	330	41.656	41.306	48.529	1.00	27.12	C
ATOM	2541	C	LEU	A	330	41.156	40.453	49.677	1.00	27.74	C
ATOM	2542	O	LEU	A	330	40.845	40.959	50.748	1.00	27.62	O
ATOM	2543	CB	LEU	A	330	40.517	42.138	47.984	1.00	27.19	C
ATOM	2544	CG	LEU	A	330	40.966	43.131	46.915	1.00	27.69	C
ATOM	2545	CD1	LEU	A	330	39.747	43.661	46.211	1.00	28.15	C
ATOM	2546	CD2	LEU	A	330	41.774	44.271	47.525	1.00	27.60	C
ATOM	2547	N	GLY	A	331	41.054	39.154	49.434	1.00	28.45	N
ATOM	2548	CA	GLY	A	331	40.637	38.222	50.457	1.00	29.04	C
ATOM	2549	C	GLY	A	331	39.154	38.239	50.748	1.00	29.16	C
ATOM	2550	O	GLY	A	331	38.698	37.505	51.615	1.00	29.67	O
ATOM	2551	N	ASN	A	332	38.409	39.088	50.052	1.00	29.16	N
ATOM	2552	CA	ASN	A	332	36.973	39.190	50.243	1.00	29.38	C

ATOM	2553	C	ASN A 332	36.342	39.718	48.958	1.00	28.80	C
ATOM	2554	O	ASN A 332	36.579	40.847	48.570	1.00	28.58	O
ATOM	2555	CB	ASN A 332	36.662	40.123	51.413	1.00	29.68	C
ATOM	2556	CG	ASN A 332	35.181	40.214	51.702	1.00	31.38	C
ATOM	2557	OD1	ASN A 332	34.368	39.630	50.991	1.00	35.54	O
ATOM	2558	ND2	ASN A 332·	34.820	40.944	52.751	1.00	33.23	N
ATOM	2559	N	PRO A 333	35.504	38.922	48.325	1.00	28.45	N
ATOM	2560	CA	PRO A 333	34.944	39.288	47.025	1.00	28.38	C
ATOM·	2561	C	PRO A 333	34.094	40.534	47.093	1.00	28.04	C
ATOM	2562	O	PRO A 333	33.913	41.187	46.073	1.00	28.11	O
ATOM	2563	CB·	PRO A 333	34.071	38.093	46.640	1.00	28.23	C
ATOM	2564	CG	PRO A 333	34.203	37.097	47.701	1.00	29.36	C
ATOM	2565	CD	PRO A· 333	34.999	37.641	48.822	1.00	28.91	C
ATOM	2566	N	GLN A 334	33.556	40.844	48.262	1.00	27.75	N
ATOM	2567	CA	GLN A 334	32.727	42.033	48.400	1.00	28.08	C
ATOM	2568	C	GLN A 334	33.582	43.282	48.300	1.00	26.62	C
ATOM	2569	O	GLN A 334	33.064	44.365	48.086	1.00	26.31	O
ATOM	2570	CB	GLN A 334	31.857	41.989	49.686	1.00	28.89	C
ATOM	2571	CG	GLN A 334	30.594	41.090	49.459	1.00	32.52	C
ATOM	2572	CD	GLN A 334	29.523	41.114	50.556	1.00	36.22	C
ATOM	2573	OE1	GLN A 334	29.500	42.004	51.421	1.00	39.82	O
ATOM	2574	NE2	GLN A 334	28.612	40.127	50.503	1.00	38.24	N
ATOM	2575	N	GLU A 335	34.894	43.138	48.414	1.00	25.23	N
ATOM	2576	CA	GLU A 335	35.763	44.290	48.269	1.00	24.55	C
ATOM	2577	C	GLU A 335	36.090	44.584	46.790	1.00	22.95	C
ATOM	2578	O	GLU A 335	36.691	45.597	46.475	1.00	21.47	O
ATOM	2579	CB	GLU A 335	37.038	44.091	49.088	1.00	25.61	C
ATOM	2580	CG	GLU A 335	36.820	44.189	50.599	1.00	29.47	C
ATOM	2581	CD	GLU A 335	38.115	44.280	51.369	1.00	34.49	C
ATOM	2582	OE1	GLU A 335	38.964	45.124	51.004	1.00	39.50	O
ATOM	2583	OE2	GLU A 335	38.288	43.521	52.350	1.00	40.05	O
ATOM	2584	N	VAL A 336	35.654	43.722	45.877	1.00	21.52	N
ATOM	2585	CA	VAL A 336	35.993	43.898	44.458	1.00	20.69	C
ATOM	2586	C	VAL A 336	35.422	45.176	43.855	1.00	19.97	C
ATOM	2587	O	VAL A 336	36.134	45.949	43.239	1.00	19.57	O
ATOM	2588	CB	VAL A 336	35.594	42.683	43.653	1.00	20.59	C
ATOM	2589	CG1	VAL A 336	35.746	42.933	42.179	1.00	21.20	C
ATOM	2590	CG2	VAL A 336	36.467	41.513	44.067	1.00	21.28	C
ATOM	2591	N	GLY A 337	34.146	45.421	44.080	1.00	19.82	N
ATOM	2592	CA	GLY A 337	33.492	46.598	43.568	1.00	19.66	C
ATOM	2593	C	GLY A 337	34.130	47.906	43.981	1.00	19.56	C
ATOM	2594	O	GLY A 337	34.510	48.693	43.131	1.00	19.35	O
ATOM	2595	N	PRO A 338	34.202	48.162	45.278	1.00	19.93	N
ATOM	2596	CA	PRO A 338	34.846	49.383	45.790	1.00	19.88	C
ATOM	2597	C	PRO A 338	36.272	49.631	45.254	1.00	19.22	C
ATOM	2598	O	PRO A 338	36.591	50.758	44.908	1.00	18.43	O
ATOM	2599	CB	PRO A 338	34.830	49.191	47.316	1.00	19.61	C
ATOM	2600	CG	PRO A 338	33.625	48.380	47.555	1.00	20.33	C
ATOM	2601	CD	PRO A 338	33.579	47.367	46.359	1.00	20.75	C
ATOM	2602	N	LEU A 339	37.107	48.612	45.171	1.00	19.21	N
ATOM	2603	CA	LEU A 339	38.416	48.814	44.566	1.00	19.65	C
ATOM	2604	C	LEU A· 339	38.283	49.219	43.081	1.00	19.35	C
ATOM	2605	O	LEU A 339	38.927	50.188	42.621	1.00	17.91	O
ATOM	2606	CB	LEU A 339	39.279	47.570	44.693	1.00	20.38	C
ATOM	2607	CG	LEU A 339	40.745	47.814	44.291	1.00	21.96	C
ATOM	2608	CD1	LEU A 339	41.681	47.151	45.220	1.00	25.12	C
ATOM	2609	CD2	LEU A 339	40.991	47.293	42.899	1.00	22.54	C
ATOM	2610	N	LEU A 340	37.420	48.512	42.345	1.00	19.18	N
ATOM	2611	CA	LEU A 340	37.231	48.821	40.928	1.00	19.26	C
ATOM	2612	C	LEU A 340	36.764	50.260	40.746	1.00	19.52	C
ATOM	2613	O	LEU A 340	37.306	50.989	39.893	1.00	18.71	O

ATOM	2614	CB	LEU A 340	36.260	47.857	40.273	1.00	19.85	C
ATOM	2615	CG	LEU A 340	36.823	46.470	39.960	1.00	21.77	C
ATOM	2616	CD1	LEU A 340	35.745	45.671	39.299	1.00	22.81	C
ATOM	2617	CD2	LEU A 340	38.088	46.539	39.072	1.00	21.14	C
ATOM	2618	N	ASN A 341	35.798	50.676	41.570	1.00	19.12	N
ATOM	2619	CA	ASN A·341	35.296	52.052	41.536	1.00	20.43	C
ATOM	2620	C	ASN A 341	36.367	53.086	41.865	1.00	19.90	C
ATOM	2621	O	ASN A 341	36.474	54.110	41.206	1.00	19.81	O
ATOM	2622	CB	ASN A 341	34.090	52.232	42.485	1.00	20.40	C
ATOM	2623	CG	ASN A 341	32.814	51.659	41.898	1.00	24.06	C
ATOM	2624	OD1	ASN A 341	32.390	52.073	40.829	1.00	31.36	O
ATOM	2625	ND2	ASN A 341	32.229	50.666	42.561	1.00	25.82	N
ATOM	2626	N	THR A 342	37.129	52.812	42.912	1.00	19.43	N
ATOM	2627	CA	THR A 342	38.227	53.664	43.305	1.00	19.71	C
ATOM	2628	C	THR A 342	39.230	53.781	42.154	1.00	19.45	C
ATOM	2629	O	THR A 342	39.739	54.859	41.893	1.00	19.23	O
ATOM	2630	CB	THR A 342	38.873	53.073	44.555	1.00	20.44	C
ATOM	2631	OG1	THR A 342	38.030	53.322	45.700	1.00	21.13	O
ATOM	2632	CG2	THR A 342	40.208	53.756	44.874	1.00	20.71	C
ATOM	2633	N	MET A 343	39.464	52.691	41.427	1.00	19.49	N
ATOM	2634	CA	MET A 343	40.381	52.723	40.287	1.00	19.90	C
ATOM	2635	C	MET A 343	39.932	53.649	39.164	1.00	19.94	C
ATOM	2636	O	MET A 343	40.775	54.344	38.567	1.00	18.43	O
ATOM	2637	CB	MET A 343	40.543	51.347	39.664	1.00	19.92	C
ATOM	2638	CG	MET A 343	41.701	50.556	40.115	1.00	23.07	C
ATOM	2639	SD	MET A 343	42.163	49.194	38.959	1.00	24.93	S
ATOM	2640	CE	MET A 343	41.013	48.220	39.315	1.00	27.48	C
ATOM	2641	N	ILE A 344	38.629	53.643	38.837	1.00	20.84	N
ATOM	2642	CA	ILE A 344	38.159	54.412	37.679	1.00	21.51	C
ATOM	2643	C	ILE A 344	37.624	55.800	37.918	1.00	21.46	C
ATOM	2644	O	ILE A 344	37.751	56.639	37.018	1.00	21.65	O
ATOM	2645	CB	ILE A 344	37.089	53.641	36.805	1.00	22.58	C
ATOM	2646	CG1	ILE A 344	35.714	53.723	37.435	1.00	24.65	C
ATOM	2647	CG2	ILE A 344	37.506	52.220	36.555	1.00	23.63	C
ATOM	2648	CD1	ILE A 344	34.635	53.407	36.511	1.00	28.35	C
ATOM	2649	N	LYS A 345	37.009	56.092	39.062	1.00	21.48	N
ATOM	2650	CA	LYS A 345	36.410	57.433	39.154	1.00	22.11	C
ATOM	2651	C	LYS A 345	37.382	58.569	39.127	1.00	20.79	C
ATOM	2652	O	LYS A 345	38.380	58.614	39.863	1.00	20.06	O
ATOM	2653	CB	LYS A 345	35.405	57.656	40.279	1.00	23.49	C
ATOM	2654	CG	LYS A 345	35.497	56.838	41.473	1.00	28.03	C
ATOM	2655	CD	LYS A 345	34.120	56.183	41.683	1.00	30.07	C
ATOM	2656	CE	LYS A 345	33.282	56.986	42.624	1.00	32.44	C
ATOM	2657	NZ	LYS A 345	33.859	56.977	43.982	1.00	36.32	N
ATOM	2658	N	GLY A 346	37.062	59.501	38.243	1.00	19.28	N
ATOM	2659	CA	GLY A 346	37.911	60.636	38.013	1.00	18.60	C
ATOM	2660	C	GLY A 346	39.222	60.254	37.350	1.00	17.41	C
ATOM	2661	O	GLY A 346	40.090	61.079	37.229	1.00	18.04	O
ATOM	2662	N	ARG A 347	39.353	59.024	36.898	1.00	17.62	N
ATOM	2663	CA	ARG A 347	40.616	58.563	36.297	1.00	17.91	C
ATOM	2664	C	ARG A 347	40.415	57.992	34.874	1.00	18.08	C
ATOM	2665	O	ARG A 347	41.108	58.395	33.938	1.00	17.06	O
ATOM	2666	CB	ARG A 347	41.284	57.532	37.213	1.00	17.51	C
ATOM	2667	CG	ARG A 347	41.719	58.081	38.592	1.00	15.94	C
ATOM	2668	CD	ARG A 347	43.179	57.649	38.985	1.00	19.49	C
ATOM	2669	NE	ARG A 347	43.165	56.242	38.980	1.00	18.58	N
ATOM	2670	CZ	ARG A 347	44.048	55.405	38.518	1.00	14.88	C
ATOM	2671	NH1	ARG A 347	45.271	55.726	38.085	1.00	17.47	N
ATOM	2672	NH2	ARG A 347	43.678	54.158	38.611	1.00	11.18	N
ATOM	2673	N	TYR A 348	39.450	57.091	34.732	1.00	18.81	N
ATOM	2674	CA	TYR A 348	39.098	56.480	33.444	1.00	20.50	C

ATOM	2675	C	TYR	A	348	37.637	56.691	33.036	1.00	22.07	C
ATOM	2676	O	TYR	A	348	37.233	56.236	31.978	1.00	22.11	O
ATOM	2677	CB	TYR	A	348	39.311	54.963	33.478	1.00	19.77	C
ATOM	2678	CG	TYR	A	348	40.753	54.545	33.561	1.00	20.36	C
ATOM	2679	CD1	TYR	A	348	41.540	54.483	32.422	1.00	19.91	C
ATOM	2680	CD2	TYR	A·348	41.335	54.225	34.780	1.00	18.20	C
ATOM	2681	CE1	TYR	A	348	42.859	54.099	32.489	1.00	19.81	C
ATOM	2682	CE2	TYR	A	348	42.662	53.841	34.863	1.00	19.47	C
ATOM	2683	CZ	TYR	A	348	43.425	53.785	33.711	1.00	19.43	C
ATOM	2684	OH	TYR	A	348	44.742	53.414	33.773	1.00	15.61	O
ATOM	2685·	N	ASN	A	349	36.820	57.344	33.850	1.00	24.37	N
ATOM	2686	CA	ASN	A	349	35.414	57.472	33.456	1.00	26.66	C
ATOM	2687	C	ASN	A	349	34.941	58.854	33.092	1.00	28.03	C
ATOM	2688	O	ASN	A	349	35.663	59.847	32.992	1.00	27.79	O
ATOM	2689	CB	ASN	A	349	34.498	56.919	34.518	1.00	26.23	C
ATOM	2690	CG	ASN	A	349	34.463	57.764	35.748	1.00	27.89	C
ATOM	2691	OD1	ASN	A	349	35.247	58.718	35.927	1.00	27.38	O
ATOM	2692	ND2	ASN	A	349	33.545	57.409	36.645	1.00	32.46	N
ATOM	2693	OXT	ASN	A	349	33.736	58.963	32.900	1.00	32.44	O
TER	2694		ASN	A	349						
ATOM	2695	N	LEU	S	795	45.819	35.786	30.984	1.00	36.91	N
ATOM	2696	CA	LEU	S	795	44.711	36.756	31.250	1.00	37.26	C
ATOM	2697	C	LEU	S	795	43.553	36.418	30.323	1.00	37.49	C
ATOM	2698	O	LEU	S	795	42.391	36.451	30.712	1.00	36.90	O
ATOM	2699	CB	LEU	S	795	45.183	38.186	31.044	1.00	37.26	C
ATOM	2700	CG	LEU	S	795	44.683	39.204	32.074	1.00	37.32	C
ATOM	2701	CD1	LEU	S	795	44.775	38.671	33.479	1.00	37.34	C
ATOM	2702	CD2	LEU	S	795	45.479	40.493	32.006	1.00	37.95	C
ATOM	2703	N	THR	S	796	43.907	36.155	29.076	1.00	38.07	N
ATOM	2704	CA	THR	S	796	43.029	35.548	28.076	1.00	39.17	C
ATOM	2705	C	THR	S	796	42.608	34.088	28.347	1.00	38.93	C
ATOM	2706	O	THR	S	796	41.784	33.533	27.622	1.00	39.51	O
ATOM	2707	CB	THR	S	796	43.750	35.628	26.705	1.00	39.45	C
ATOM	2708	OG1	THR	S	796	43.287	34.597	25.850	1.00	41.87	O
ATOM	2709	CG2	THR	S	796	45.232	35.275	26.824	1.00	40.14	C
ATOM	2710	N	SER	S	797	43.154	33.451	29.369	1.00	38.98	N
ATOM	2711	CA	SER	S	797	42.770	32.067	29.654	1.00	39.24	C
ATOM	2712	C	SER	S	797	41.370	31.981	30.274	1.00	39.32	C
ATOM	2713	O	SER	S	797	40.901	32.905	30.939	1.00	38.28	O
ATOM	2714	CB	SER	S	797	43.775	31.398	30.574	1.00	38.98	C
ATOM	2715	OG	SER	S	797	43.613	31.884	31.891	1.00	40.40	O
ATOM	2716	N	TYR	S	798	40.713	30.851	30.059	1.00	39.93	N
ATOM	2717	CA	TYR	S	798	39.345	30.682	30.515	1.00	40.53	C
ATOM	2718	C	TYR	S	798	39.088	29.350	31.183	1.00	39.72	C
ATOM	2719	O	TYR	S	798	39.797	28.383	30.958	1.00	39.72	O
ATOM	2720	CB	TYR	S	798	38.377	30.881	29.351	1.00	41.28	C
ATOM	2721	CG	TYR	S	798	38.524	29.939	28.171	1.00	44.57	C
ATOM	2722	CD1	TYR	S	798	39.574	30.071	27.261	1.00	47.13	C
ATOM	2723	CD2	TYR	S	798	37.574	28.953	27.932	1.00	47.85	C
ATOM	2724	CE1	TYR	S	798	39.692	29.219	26.163	1.00	48.81	C
ATOM	2725	CE2	TYR	S	798	37.680	28.094	26.833	1.00	50.32	C
ATOM	2726	CZ	TYR	S	798	38.744	28.229	25.955	1.00	49.97	C
ATOM	2727	OH	TYR	S	798	38.835	27.387	24.866	1.00	49.58	O
ATOM	2728	N	ASP	S	799	38.051	29.306	32.005	1.00	39.16	N
ATOM	2729	CA	ASP	S	799	37.676	28.076	32.690	1.00	38.61	C
ATOM	2730	C	ASP	S	799	36.588	27.391	31.868	1.00	37.26	C
ATOM	2731	O	ASP	S	799	36.468	27.657	30.671	1.00	36.81	O
ATOM	2732	CB	ASP	S	799	37.186	28.399	34.105	1.00	39.29	C
ATOM	2733	CG	ASP	S	799	37.303	27.223	35.048	1.00	40.55	C
ATOM	2734	OD1	ASP	S	799	36.767	26.128	34.756	1.00	41.68	O
ATOM	2735	OD2	ASP	S	799	37.913	27.319	36.121	1.00	45.38	O

ATOM	2736	N	CYS S 800	35.795	26.517	32.486	1.00	35.61	N
ATOM	2737	CA	CYS S 800	34.781	25.787	31.732	1.00	34.66	C
ATOM	2738	C	CYS S 800	33.439	25.714	32.450	1.00	34.03	C
ATOM	2739	O	CYS S 800	32.749	24.708	32.388	1.00	33.81	O
ATOM	2740	CB	CYS S 800	35.274	24.380	31.423	1.00	34.32	C
ATOM	2741	SG	CYS S 800	35.538	23.392	32.911	1.00	33.88	S
ATOM	2742	N	GLU S 801	33.051	26.792	33.101	1.00	33.69	N
ATOM	2743	CA	GLU S 801	31.808	26.803	33.859	1.00	33.94	C
ATOM	2744	C	GLU S 801	30.551	26.980	32.991	1.00	33.69	C
ATOM	2745	O	GLU S 801	30.520	27.739	32.012	1.00	32.67	O
ATOM	2746	CB	GLU S 801	31.886	27.877	34.942	1.00	34.03	C
ATOM	2747	CG	GLU S 801	33.128	27.703	35.818	1.00	36.03	C
ATOM	2748	CD	GLU S 801	33.095	28.557	37.065	1.00	36.15	C
ATOM	2749	OE1	GLU S 801	32.408	28.163	38.013	1.00	35.62	O
ATOM	2750	OE2	GLU S 801	33.751	29.619	37.090	1.00	38.69	O
ATOM	2751	N	VAL S 802	29.519	26.242	33.377	1.00	33.95	N
ATOM	2752	CA	VAL S 802	28.244	26.223	32.691	1.00	33.82	C
ATOM	2753	C	VAL S 802	27.137	26.148	33.735	1.00	34.17	C
ATOM	2754	O	VAL S 802	27.408	25.928	34.908	1.00	33.56	O
ATOM	2755	CB	VAL S 802	28.139	24.972	31.781	1.00	33.63	C
ATOM	2756	CG1	VAL S 802	29.263	24.948	30.753	1.00	32.61	C
ATOM	2757	CG2	VAL S 802	28.165	23.682	32.624	1.00	33.77	C
ATOM	2758	N	ASN S 803	25.887	26.304	33.300	1.00	35.05	N
ATOM	2759	CA	ASN S 803	24.745	26.222	34.204	1.00	35.82	C
ATOM	2760	C	ASN S 803	24.457	24.784	34.642	1.00	37.45	C
ATOM	2761	O	ASN S 803	23.379	24.241	34.387	1.00	37.12	O
ATOM	2762	CB	ASN S 803	23.490	26.836	33.573	1.00	35.36	C
ATOM	2763	CG	ASN S 803	23.548	28.344	33.506	1.00	33.54	C
ATOM	2764	OD1	ASN S 803	24.605	28.941	33.685	1.00	32.05	O
ATOM	2765	ND2	ASN S 803	22.414	28.967	33.230	1.00	29.41	N
ATOM	2766	N	ALA S 804	25.442	24.187	35.298	1.00	39.28	N
ATOM	2767	CA	ALA S 804	25.340	22.846	35.855	1.00	41.13	C
ATOM	2768	C	ALA S 804	26.566	22.620	36.734	1.00	42.43	C
ATOM	2769	O	ALA S 804	27.638	23.153	36.464	1.00	42.47	O
ATOM	2770	CB	ALA S 804	25.277	21.791	34.762	1.00	41.08	C
ATOM	2771	N	PRO S 805	26.410	21.830	37.786	1.00	44.47	N
ATOM	2772	CA	PRO S 805	27.527	21.527	38.697	1.00	45.68	C
ATOM	2773	C	PRO S 805	28.568	20.620	38.053	1.00	46.82	C
ATOM	2774	O	PRO S 805	28.273	19.918	37.092	1.00	47.40	O
ATOM	2775	CB	PRO S 805	26.847	20.783	39.854	1.00	45.66	C
ATOM	2776	CG	PRO S 805	25.588	20.206	39.261	1.00	45.01	C
ATOM	2777	CD	PRO S 805	25.161	21.146	38.177	1.00	44.63	C
ATOM	2778	N	ILE S 806	29.770	20.613	38.605	1.00	48.31	N
ATOM	2779	CA	ILE S 806	30.847	19.766	38.098	1.00	49.34	C
ATOM	2780	C	ILE S 806	30.661	18.323	38.555	1.00	49.57	C
ATOM	2781	O	ILE S 806	29.992	18.063	39.560	1.00	50.13	O
ATOM	2782	CB	ILE S 806	32.215	20.311	38.574	1.00	49.85	C
ATOM	2783	CG1	ILE S 806	32.410	20.058	40.074	1.00	50.64	C
ATOM	2784	CG2	ILE S 806	32.327	21.816	38.250	1.00	50.45	C
ATOM	2785	CD1	ILE S 806	33.724	20.605	40.624	1.00	51.43	C
ATOM	2786	N	LEU S 813	29.871	8.315	36.218	1.00	46.23	N
ATOM	2787	CA	LEU S 813	30.588	8.788	35.034	1.00	46.32	C
ATOM	2788	C	LEU S 813	29.685	9.635	34.140	1.00	45.87	C
ATOM	2789	O	LEU S 813	28.463	9.511	34.185	1.00	45.43	O
ATOM	2790	CB	LEU S 813	31.166	7.606	34.243	1.00	46.25	C
ATOM	2791	CG	LEU S 813	32.057	6.663	35.059	1.00	46.61	C
ATOM	2792	CD1	LEU S 813	32.444	5.423	34.230	1.00	46.51	C
ATOM	2793	CD2	LEU S 813	33.292	7.406	35.579	1.00	45.98	C
ATOM	2794	N	GLN S 814	30.309	10.503	33.351	1.00	45.81	N
ATOM	2795	CA	GLN S 814	29.595	11.400	32.446	1.00	45.92	C
ATOM	2796	C	GLN S 814	30.497	11.838	31.296	1.00	45.66	C

TOM	2797	O	GLN	S	814	31.706	11.626	31.329	1.00 45.05	O
TOM	2798	CB	GLN	S	814	29.123	12.643	33.198	1.00 46.09	C
TOM	2799	CG	GLN	S	814	30.265	13.531	33.696	1.00 47.32	C
TOM	2800	CD	GLN	S	814	29.781	14.722	34.520	1.00 49.22	C
TOM	2801	OE1	GLN	S	814	29.165	14.541	35.569	1.00 50.40	O
TOM	2802	NE2	GLN	S	814	30.070	15.937	34.053	1.00 49.45	N
TOM	2803	N	GLY	S	815	29.898	12.476	30.294	1.00 45.88	N
TOM	2804	CA	GLY	S	815	30.621	12.956	29.135	1.00 45.84	C
TOM	2805	C	GLY	S	815	31.426	11.863	28.462	1.00 46.13	C
TOM	2806	O	GLY	S	815	30.968	10.732	28.339	1.00 45.49	O
TOM	2807	N	GLU	S	816	32.633	12.216	28.035	1.00 46.94	N
TOM	2808	CA	GLU	S	816	33.548	11.285	27.382	1.00 48.03	C
TOM	2809	C	GLU	S	816	33.721	9.994	28.186	1.00 48.62	C
TOM	2810	O	GLU	S	816	33.823	8.910	27.614	1.00 48.54	O
TOM	2811	CB	GLU	S	816	34.920	11.948	27.184	1.00 48.06	C
TOM	2812	CG	GLU	S	816	35.783	11.312	26.102	1.00 48.93	C
TOM	2813	CD	GLU	S	816	37.189	11.887	26.062	1.00 49.77	C
TOM	2814	OE1	GLU	S	816	38.031	11.413	26.848	1.00 50.86	O
TOM	2815	OE2	GLU	S	816	37.457	12.802	25.247	1.00 49.55	O
TOM	2816	N	GLU	S	817	33.737	10.112	29.509	1.00 49.67	N
TOM	2817	CA	GLU	S	817	33.947	8.957	30.373	1.00 50.75	C
TOM	2818	C	GLU	S	817	32.786	7.982	30.309	1.00 51.10	C
TOM	2819	O	GLU	S	817	32.989	6.771	30.278	1.00 51.12	O
TOM	2820	CB	GLU	S	817	34.164	9.406	31.815	1.00 50.97	C
TOM	2821	CG	GLU	S	817	35.476	10.140	32.032	1.00 52.22	C
TOM	2822	CD	GLU	S	817	35.395	11.637	31.764	1.00 54.47	C
TOM	2823	OE1	GLU	S	817	34.289	12.166	31.489	1.00 55.57	O
TOM	2824	OE2	GLU	S	817	36.456	12.296	31.833	1.00 56.41	O
TOM	2825	N	LEU	S	818	31.572	8.521	30.295	1.00 51.81	N
TOM	2826	CA	LEU	S	818	30.376	7.706	30.204	1.00 52.37	C
TOM	2827	C	LEU	S	818	30.399	6.929	28.901	1.00 53.14	C
TOM	2828	O	LEU	S	818	30.216	5.714	28.894	1.00 53.00	O
TOM	2829	CB	LEU	S	818	29.116	8.575	30.258	1.00 52.25	C
TOM	2830	CG	LEU	S	818	27.786	7.814	30.176	1.00 52.17	C
TOM	2831	CD1	LEU	S	818	27.661	6.836	31.335	1.00 52.37	C
TOM	2832	CD2	LEU	S	818	26.596	8.749	30.173	1.00 51.16	C
TOM	2833	N	LEU	S	819	30.660	7.643	27.809	1.00 54.00	N
TOM	2834	CA	LEU	S	819	30.623	7.068	26.465	1.00 54.73	C
TOM	2835	C	LEU	S	819	31.573	5.874	26.295	1.00 55.32	C
TOM	2836	O	LEU	S	819	31.171	4.823	25.794	1.00 55.08	O
TOM	2837	CB	LEU	S	819	30.929	8.162	25.426	1.00 54.66	C
TOM	2838	CG	LEU	S	819	30.838	7.789	23.942	1.00 54.90	C
TOM	2839	CD1	LEU	S	819	29.480	7.239	23.559	1.00 54.56	C
TOM	2840	CD2	LEU	S	819	31.170	8.997	23.088	1.00 55.68	C
TOM	2841	N	ARG	S	820	32.821	6.036	26.725	1.00 55.92	N
TOM	2842	CA	ARG	S	820	33.817	4.987	26.576	1.00 56.75	C
TOM	2843	C	ARG	S	820	33.488	3.762	27.428	1.00 56.92	C
TOM	2844	O	ARG	S	820	33.578	2.617	26.951	1.00 56.86	O
TOM	2845	CB	ARG	S	820	35.207	5.530	26.915	1.00 57.13	C
TOM	2846	CG	ARG	S	820	35.638	6.596	25.927	1.00 58.55	C
TOM	2847	CD	ARG	S	820	37.073	7.038	26.036	1.00 60.19	C
TOM	2848	NE	ARG	S	820	37.336	8.126	25.096	1.00 62.23	N
TOM	2849	CZ	ARG	S	820	38.465	8.831	25.039	1.00 64.08	C
TOM	2850	NH1	ARG	S	820	39.475	8.567	25.865	1.00 64.81	N
TOM	2851	NH2	ARG	S	820	38.586	9.805	24.142	1.00 64.58	N
TOM	2852	N	ALA	S	821	33.109	4.003	28.682	1.00 56.90	N
TOM	2853	CA	ALA	S	821	32.713	2.919	29.567	1.00 56.79	C
TOM	2854	C	ALA	S	821	31.611	2.106	28.880	1.00 56.74	C
TOM	2855	O	ALA	S	821	31.665	0.873	28.843	1.00 56.66	O
TOM	2856	CB	ALA	S	821	32.236	3.463	30.899	1.00 56.66	C
TOM	2857	N	LEU	S	822	30.629	2.806	28.317	1.00 56.51	N

ATOM	2858	CA	LEU	S	822	29.537	2.155	27.607	1.00 56.58	C
ATOM	2859	C	LEU	S	822	30.031	1.473	26.338	1.00 56.66	C
ATOM	2860	O	LEU	S	822	29.482	0.451	25.931	1.00 57.09	O
ATOM	2861	CB	LEU	S	822	28.451	3.167	27.250	1.00 56.48	C
ATOM	2862	CG	LEU	S	822	27.681	3.779	28.417	1.00 56.11	C
ATOM	2863	CD1	LEU	S	822	26.543	4.612	27.870	1.00 55.96	C
ATOM	2864	CD2	LEU	S	822	27.156	2.717	29.379	1.00 55.80	C
TER	2865		LEU	S	822					
HETATM	2866	FE	FE2	A	1350	23.313	27.671	28.779	1.00 22.12	FE
HETATM	2867	C1	AKG	A	1351	22.355	25.315	27.747	1.00 25.61	C
HETATM	2868	O1	AKG	A	1351	23.449	25.880	27.756	1.00 27.58	O
HETATM	2869	O2	AKG	A	1351	22.172	24.103	27.197	1.00 27.99	O
HETATM	2870	C2	AKG	A	1351	21.128	25.999	28.365	1.00 24.14	C
HETATM	2871	O5	AKG	A	1351	21.211	27.117	28.854	1.00 23.66	O
HETATM	2872	C3	AKG	A	1351	19.829	25.231	28.280	1.00 23.46	C
HETATM	2873	C4	AKG	A	1351	18.717	25.967	29.008	1.00 22.15	C
HETATM	2874	C5	AKG	A	1351	17.351	25.435	28.649	1.00 23.90	C
HETATM	2875	O3	AKG	A	1351	17.136	24.674	27.706	1.00 23.27	O
HETATM	2876	O4	AKG	A	1351	16.353	25.844	29.406	1.00 25.34	O
HETATM	2877	S	SO4	A	1352	0.196	25.255	43.681	1.00 83.69	S
HETATM	2878	O1	SO4	A	1352	1.049	26.078	44.531	1.00 83.03	O
HETATM	2879	O2	SO4	A	1352	1.028	24.391	42.840	1.00 82.84	O
HETATM	2880	O3	SO4	A	1352	-0.643	24.431	44.542	1.00 83.90	O
HETATM	2881	O4	SO4	A	1352	-0.630	26.114	42.830	1.00 82.82	O
HETATM	2882	S	SO4	A	1353	1.937	28.607	29.759	1.00 80.69	S
HETATM	2883	O1	SO4	A	1353	3.164	29.179	30.298	1.00 79.82	O
HETATM	2884	O2	SO4	A	1353	2.228	27.552	28.793	1.00 79.89	O
HETATM	2885	O3	SO4	A	1353	1.188	28.079	30.902	1.00 82.14	O
HETATM	2886	O4	SO4	A	1353	1.145	29.630	29.081	1.00 81.49	O
HETATM	2887	O	HOH	H	1	38.423	33.864	31.899	1.00 39.52	O
HETATM	2888	O	HOH	H	2	38.025	25.366	29.554	1.00 64.59	O
HETATM	2889	O	HOH	H	3	34.915	30.689	35.190	1.00 34.36	O
HETATM	2890	O	HOH	H	4	20.482	27.037	33.306	1.00 55.20	O
HETATM	2891	O	HOH	H	5	21.066	24.447	32.916	1.00 43.55	O
HETATM	2892	O	HOH	H	6	29.978	24.394	35.721	1.00 43.81	O
HETATM	2893	O	HOH	H	7	29.346	18.985	42.744	1.00 86.25	O
HETATM	2894	O	HOH	H	8	35.530	13.904	24.157	1.00 42.65	O
HETATM	2895	O	HOH	H	9	33.804	-1.383	26.877	1.00 65.05	O
HETATM	2896	O	HOH	Z	1	11.560	21.626	13.846	1.00 41.47	O
HETATM	2897	O	HOH	Z	2	9.590	21.877	12.314	1.00 61.59	O
HETATM	2898	O	HOH	Z	3	1.321	21.339	7.657	1.00 58.53	O
HETATM	2899	O	HOH	Z	4	3.579	13.365	8.778	1.00 47.77	O
HETATM	2900	O	HOH	Z	5	4.515	16.855	3.766	1.00 51.50	O
HETATM	2901	O	HOH	Z	6	2.462	19.552	5.161	1.00 56.40	O
HETATM	2902	O	HOH	Z	7	1.251	29.413	13.184	1.00 52.18	O
HETATM	2903	O	HOH	Z	8	2.053	32.304	13.875	1.00 71.43	O
HETATM	2904	O	HOH	Z	9	11.574	44.907	14.867	1.00 67.18	O
HETATM	2905	O	HOH	Z	10	11.615	3.238	17.221	1.00 63.99	O
HETATM	2906	O	HOH	Z	11	3.752	32.951	32.375	1.00 72.66	O
HETATM	2907	O	HOH	Z	12	4.803	37.611	27.421	1.00 63.47	O
HETATM	2908	O	HOH	Z	13	11.007	35.734	30.393	1.00 34.95	O
HETATM	2909	O	HOH	Z	14	15.551	46.392	24.481	1.00 43.01	O
HETATM	2910	O	HOH	Z	15	12.231	41.979	15.720	1.00 53.94	O
HETATM	2911	O	HOH	Z	16	13.868	4.815	17.661	1.00 48.46	O
HETATM	2912	O	HOH	Z	17	15.860	30.606	12.755	1.00 44.45	O
HETATM	2913	O	HOH	Z	18	13.462	22.030	7.390	1.00 59.18	O
HETATM	2914	O	HOH	Z	19	14.706	26.336	13.845	1.00 51.42	O
HETATM	2915	O	HOH	Z	20	17.028	29.994	7.603	1.00 64.07	O
HETATM	2916	O	HOH	Z	21	21.135	23.988	3.773	1.00 46.32	O
HETATM	2917	O	HOH	Z	22	27.581	31.130	6.026	1.00 64.13	O
HETATM	2918	O	HOH	Z	23	27.341	22.242	43.414	1.00 79.43	O

HETATM	2919	O	HOH	Z	24	36.742	29.331	21.279	1.00 50.70	O
HETATM	2920	O	HOH	Z	25	30.029	33.533	9.206	1.00 50.33	O
HETATM	2921	O	HOH	Z	26	29.955	37.104	10.551	1.00 70.40	O
HETATM	2922	O	HOH	Z	27	18.215	15.129	13.036	1.00 37.33	O
HETATM	2923	O	HOH	Z	28	29.069	5.533	17.355	1.00 44.84	O
HETATM	2924	O	HOH	Z·	29	18.941	14.771	16.383	1.00 31.41	O
HETATM	2925	O	HOH	Z	30	13.624	7.655	18.343	1.00 46.45	O
HETATM	2926	O	HOH	Z	31	5.649	12.667	27.758	1.00 44.15	O
HETATM	2927	O	HOH	Z	32	18.818 · 6.772		36.717	1.00 51.59	O
HETATM	2928	O	HOH	Z	33	7.620	14.589	19.463	1.00 50.93	O
HETATM	2929	O	HOH	Z	34	20.087	9.746	36.974	1.00 52.81	O
HETATM	2930	O	HOH	Z	35	21.912	13.173	44.511	1.00 59.64	O
HETATM	2931	O	HOH	Z	36	29.233	39.992	16.108	1.00 75.75	O
HETATM	2932	O	HOH	Z	37	33.785	44.067	25.671	1.00 62.06	O
HETATM	2933	O	HOH	Z	38	15.613	37.779	35.493	1.00 52.50	O
HETATM	2934	O	HOH	Z	39	8.070	38.292	35.056	1.00 60.61	O
HETATM	2935	O	HOH	Z	40	16.339	30.957	40.378	1.00 43.15	O
HETATM	2936	O	HOH	Z	41	28.116	27.147	37.617	1.00 59.20	O
HETATM	2937	O	HOH	Z	42	29.707	30.087	39.279	1.00 54.89	O
HETATM	2938	O	HOH	Z	43	28.116	24.509	42.048	1.00 63.13	O
HETATM	2939	O	HOH	Z	44	25.074	24.801	42.258	1.00 54.81	O
HETATM	2940	O	HOH	Z	45	33.873	31.493	39.077	1.00 45.97	O
HETATM	2941	O	HOH	Z	46	31.533	33.860	46.118	1.00 50.65	O
HETATM	2942	O	HOH	Z	47	13.319	35.957	31.390	1.00 44.72	O
HETATM	2943	O	HOH	Z	48	27.155	38.119	52.311	1.00 64.05	O
HETATM	2944	O	HOH	Z	49	24.587	38.767	49.612	1.00 50.58	O
HETATM	2945	O	HOH	Z	50	21.687	17.630	48.071	1.00 77.36	O
HETATM	2946	O	HOH	Z	51	21.437	14.872	40.880	1.00 60.20	O
HETATM	2947	O	HOH	Z	52	24.790	15.406	39.359	1.00 78.81	O
HETATM	2948	O	HOH	Z	53	23.347	17.356	36.625	1.00 52.48	O
HETATM	2949	O	HOH	Z	54	21.628	10.475	34.469	1.00 47.30	O
HETATM	2950	O	HOH	Z	55	18.013	-1.527	33.036	1.00 61.93	O
HETATM	2951	O	HOH	Z	56	16.101	-0.104	30.078	1.00 59.33	O
HETATM	2952	O	HOH	Z	57	26.268	5.539	16.988	1.00 38.42	O
HETATM	2953	O	HOH	Z	58	30.916	16.527	11.437	1.00 44.01	O
HETATM	2954	O	HOH	Z	59	32.683	13.953	20.664	1.00 50.04	O
HETATM	2955	O	HOH	Z	60	36.797	10.766	7.771	1.00 80.75	O
HETATM	2956	O	HOH	Z	61	33.878	26.222	17.133	1.00 45.23	O
HETATM	2957	O	HOH	Z	62	13.442	21.089	28.459	1.00 36.04	O
HETATM	2958	O	HOH	Z	63	3.999	21.370	30.471	1.00 47.33	O
HETATM	2959	O	HOH	Z	64	30.697	38.141	33.290	1.00 31.70	O
HETATM	2960	O	HOH	Z	65	26.005	26.456	26.227	1.00 28.76	O
HETATM	2961	O	HOH	Z	66	36.729	32.146	33.280	1.00 42.61	O
HETATM	2962	O	HOH	Z	67	35.846	25.574	27.896	1.00 34.95	O
HETATM	2963	O	HOH	Z	68	36.793	26.712	21.173	1.00 33.97	O
HETATM	2964	O	HOH	Z	69	17.427	17.022	18.148	1.00 31.28	O
HETATM	2965	O	HOH	Z	70	9.904	13.694	19.533	1.00 41.70	O
HETATM	2966	O	HOH	Z	71	5.361	16.931	22.051	1.00 43.04	O
HETATM	2967	O	HOH	Z	72	7.094	16.984	20.250	1.00 43.57	O
HETATM	2968	O	HOH	Z	73	6.562	22.961	22.902	1.00 42.74	O
HETATM	2969	O	HOH	Z	74	29.508	38.942	26.471	1.00 26.72	O
HETATM	2970	O	HOH	Z	75	30.732	39.209	19.135	1.00 37.64	O
HETATM	2971	O	HOH	Z	76	26.368	42.318	17.836	1.00 57.14	O
HETATM	2972	O	HOH	Z	77	27.688	44.616	31.257	1.00 30.61	O
HETATM	2973	O	HOH	Z	78	30.230	44.988	25.170	1.00 39.14	O
HETATM	2974	O	HOH	Z	79	27.780	48.720	30.030	1.00 38.89	O
HETATM	2975	O	HOH	Z	80	25.931	50.741	30.611	1.00 40.27	O
HETATM	2976	O	HOH	Z	81	18.521	38.529	36.775	1.00 43.87	O
HETATM	2977	O	HOH	Z	82	26.678	31.402	38.482	1.00 36.08	O
HETATM	2978	O	HOH	Z	83	30.586	30.409	36.592	1.00 32.57	O
HETATM	2979	O	HOH	Z	84	29.411	37.141	35.473	1.00 26.16	O

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HETATM 2980  O    HOH Z  85     19.821  31.713  33.874  1.00 34.80          O
HETATM 2981  O    HOH Z  86     19.420  36.322  33.379  1.00 32.92          O
HETATM 2982  O    HOH Z  87     21.063  42.853  40.110  1.00 41.23          O
HETATM 2983  O    HOH Z  88     17.544  37.859  32.276  1.00 35.87          O
HETATM 2984  O    HOH Z  89      9.230  41.082  35.833  1.00 51.41          O
HETATM 2985  O    HOH Z· 90      9.313  43.744  27.890  1.00 70.60          O
HETATM 2986  O    HOH Z  91     12.728  42.598  26.938  1.00 40.87          O
HETATM 2987  O    HOH Z  92     15.113  37.993  32.591  1.00 35.55          O
HETATM 2988  O    HOH Z  93     10.676  48.283  31.613  1.00 62.24          O
HETATM 2989  O    HOH Z  94     15.611  44.853  34.883  1.00 32.72          O
HETATM 2990  O    HOH Z  95     15.874  51.836  39.217  1.00 66.58          O
HETATM 2991  O    HOH Z  96     15.796  47.224  39.264  1.00 52.95          O
HETATM 2992  O    HOH Z  97     26.624  53.557  28.816  1.00 69.05          O
HETATM 2993  O    HOH Z  98     15.381  50.418  22.170  1.00 36.68          O
HETATM 2994  O    HOH Z  99     15.121  55.730  27.489  1.00 51.35          O
HETATM 2995  O    HOH Z 100     18.542  56.170  28.175  1.00 58.02          O
HETATM 2996  O    HOH Z 101     23.731  46.355  19.907  1.00 39.06          O
HETATM 2997  O    HOH Z 102    ·16.618  46.781  22.039  1.00 33.91          O
HETATM 2998  O    HOH Z 103     26.585  40.624  15.634  1.00 69.17         ·O
HETATM 2999  O    HOH Z 104     12.758  29.333  13.489  1.00 35.42          O
HETATM 3000  O    HOH Z 105     10.886  19.245  14.132  1.00 51.89          O
HETATM 3001  O    HOH Z 106     19.776  18.049  13.245  1.00 33.88          O
HETATM 3002  O    HOH Z 107     14.725  18.642  12.190  1.00 40.50          O
HETATM 3003  O    HOH Z 108     27.783  27.681  24.556  1.00 27.24          O
HETATM 3004  O    HOH Z 109     35.999  32.896  30.270  1.00 41.19          O
HETATM 3005  O    HOH Z 110     30.237  36.282  26.881  1.00 28.77          O
HETATM 3006  O    HOH Z 111     32.759  34.258  19.346  1.00 47.40          O
HETATM 3007  O    HOH Z 112     27.418  30.315  25.756  1.00 27.70          O
HETATM 3008  O    HOH Z 113     16.248  36.360  29.657  1.00 34.03          O
HETATM 3009  O    HOH Z 114      7.438  31.072  24.792  1.00 43.13          O
HETATM 3010  O    HOH Z 115      7.743  30.565  27.379  1.00 39.83          O
HETATM 3011  O    HOH Z 116      5.158  19.080  24.012  1.00 45.77          O
HETATM 3012  O    HOH Z 117      6.366  24.013  25.459  1.00 41.84          O
HETATM 3013  O    HOH Z 118     42.594  37.813  18.527  1.00 64.57          O
HETATM 3014  O    HOH Z 119     42.361  44.340  19.742  1.00 59.24          O
HETATM 3015  O    HOH Z 120     34.674  39.749  17.782  1.00 53.99          O
HETATM 3016  O    HOH Z 121     33.762  37.015  20.310  1.00 39.85          O
HETATM 3017  O    HOH Z 122     33.121  39.446  33.667  1.00 30.35          O
HETATM 3018  O    HOH Z 123     37.674  29.865  38.229  1.00 64.32          O
HETATM 3019  O    HOH Z 124     38.677  34.824  42.977  1.00 44.37          O
HETATM 3020  O    HOH Z 125     41.375  43.570  51.489  1.00 52.41          O
HETATM 3021  O    HOH Z 126     31.947  40.559  44.192  1.00 38.39          O
HETATM 3022  O    HOH Z 127     39.124  57.396  42.134  1.00 27.12          O
HETATM 3023  O    HOH Z 128     41.949  60.812  33.590  1.00 49.78          O
HETATM 3024  O    HOH Z 129     46.835  53.394  32.063  1.00 33.50          O
HETATM 3025  O    HOH Z 130     37.841  55.408  29.621  1.00 45.14          O
CONECT 1482 2866
CONECT 1502 2866
CONECT 2171 2866
CONECT 2866 2871 2868 1482 2171 1502
CONECT 2867 2868 2869 2870
CONECT 2868 2867 2866
CONECT 2869 2867
CONECT 2870 2867 2871 2872
CONECT 2871 2866 2870
CONECT 2872 2870 2873
CONECT 2873 2872 2874
CONECT 2874 2873 2875 2876
CONECT 2875 2874
CONECT 2876 2874
CONECT 2877 2878 2879 2880 2881
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CONECT 2878 2877
CONECT 2879 2877
CONECT 2880 2877
CONECT 2881 2877
CONECT 2882 2883 2884 2885 2886
CONECT 2883 2882
CONECT 2884 2882
CONECT 2885 2882
CONECT 2886 2882
MASTER       437    0    4   15   20    0    7    6 3023    2   24   31
END
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Structure 3

Below are the coordinates for structure 3 (the 2.5 Å structure of
FIH:Zn(II):NOG:CAD):

```
HEADER      TRANSCRIPTION ACTIVATOR/INHIBITOR        12-AUG-02    1H2M
TITLE       FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX WITH HIF-1 ALPHA
TITLE      2 FRAGMENT PEPTIDE
COMPND      MOL_ID: 1;
COMPND     2 MOLECULE: FACTOR INHIBITING HIF1;
COMPND     3 SYNONYM: FIH1;
COMPND     4 CHAIN: A;
COMPND     5 ENGINEERED: YES;
COMPND     6 MOL_ID: 2;
COMPND     7 MOLECULE: HYPOXIA-INDUCIBLE FACTOR 1 ALPHA;
COMPND     8 SYNONYM: HIF-1 ALPHA, ARNT INTERACTING PROTEIN,
COMPND     9  MEMBER OF PAS PROTEIN 1, MOP1, HIF1 ALPHA, HIF1A.
COMPND    10 CHAIN: S;
COMPND    11 FRAGMENT: C-TERMINAL TRANSACTIVATION DOMAIN FRAGMENT
COMPND    12  RESIDUES 775 - 826
SOURCE      MOL_ID: 1;
SOURCE     2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE     3 ORGANISM_COMMON: HUMAN;
SOURCE     4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE     5 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE     6 EXPRESSION_SYSTEM_PLASMID: PET28A(+);
SOURCE     7 MOL_ID: 2;
SOURCE     8 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE     9 ORGANISM_COMMON: HUMAN;
SOURCE    10 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE    11 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE    12 EXPRESSION_SYSTEM_PLASMID: PGEX-GP-1
KEYWDS      FIH, HIF, DSBH, OXYGENASE, TRANSCRIPTION, HYPOXIA,
KEYWDS     2 2-OXOGLUTARATE, ASPARAGINYL HYDROXYLASE, HYDROXYLASE
EXPDTA      X-RAY DIFFRACTION
AUTHOR      J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,I.SCHLEMMINGER,
AUTHOR     2 J.F.SEIBEL,C.J.SCHOFIELD
REVDAT   1   04-SEP-02 1H2M     0
JRNL        AUTH   J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,
JRNL        AUTH 2 I.SCHLEMMINGER,J.F.SEIBEL,C.J.SCHOFIELD
JRNL        TITL  FIH:HIF-FRAGMENT COMPLEXES
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK   2
REMARK   2 RESOLUTION. 2.5  ANGSTROMS.
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3    PROGRAM     : REFMAC 5.0
REMARK   3    AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK   3
REMARK   3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3 DATA USED IN REFINEMENT.
REMARK   3    RESOLUTION RANGE HIGH (ANGSTROMS) :   2.50
REMARK   3    RESOLUTION RANGE LOW  (ANGSTROMS) :  18.00
REMARK   3    DATA CUTOFF            (SIGMA(F)) : NONE
REMARK   3    COMPLETENESS FOR RANGE        (%) :  99.68
REMARK   3    NUMBER OF REFLECTIONS             :   18404
REMARK   3
REMARK   3 FIT TO DATA USED IN REFINEMENT.
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EMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
EMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
EMARK   3   R VALUE       (WORKING + TEST SET) : 0.19432
EMARK   3   R VALUE              (WORKING SET) :  0.19185
EMARK   3   FREE R VALUE                       :  0.22491
EMARK   3   FREE R VALUE TEST SET SIZE    (%) :  7.6
EMARK   3   FREE R VALUE TEST SET COUNT   :  1516
EMARK   3
EMARK   3   FIT IN THE HIGHEST RESOLUTION BIN.
EMARK   3    TOTAL NUMBER OF BINS USED           :       20
EMARK   3    BIN RESOLUTION RANGE HIGH           :    2.500
EMARK   3    BIN RESOLUTION RANGE LOW            :    2.564
EMARK   3    REFLECTION IN BIN     (WORKING SET) :     1267
EMARK   3    BIN R VALUE           (WORKING SET) :    0.227
EMARK   3    BIN FREE R VALUE SET COUNT ·        :      106 ·
EMARK   3    BIN FREE R VALUE                    :    0.297
EMARK   3
EMARK   3   NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
EMARK   3    ALL ATOMS            :       2979
EMARK   3
EMARK   3   B VALUES.
EMARK   3    FROM WILSON PLOT         (A**2) : NULL
EMARK   3    MEAN B VALUE    (OVERALL, A**2) :   35.778
EMARK   3    OVERALL ANISOTROPIC B VALUE.
EMARK   3     B11 (A**2) :     -0.68
EMARK   3     B22 (A**2) :     -0.68
EMARK   3     B33 (A**2) :      1.35
EMARK   3     B12 (A**2) :      0.00
EMARK   3     B13 (A**2) :      0.00
EMARK   3     B23 (A**2) :      0.00
EMARK   3
EMARK   3   ESTIMATED OVERALL COORDINATE ERROR.
EMARK   3    ESU BASED ON R VALUE                            (A):    0.334
EMARK   3    ESU BASED ON FREE R VALUE                       (A):    0.233
EMARK   3    ESU BASED ON MAXIMUM LIKELIHOOD                 (A):    0.224
EMARK   3    ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2):    9.825
EMARK   3
EMARK   3 CORRELATION COEFFICIENTS.
EMARK   3    CORRELATION COEFFICIENT FO-FC       :   0.948
EMARK   3    CORRELATION COEFFICIENT FO-FC FREE :   0.935
EMARK   3
EMARK   3   RMS DEVIATIONS FROM IDEAL VALUES         COUNT    RMS      WEIGHT
EMARK   3    BOND LENGTHS REFINED ATOMS        (A): 2957 ; 0.017 ; 0.021
EMARK   3    BOND LENGTHS OTHERS               (A): 2546 ; 0.001 ; 0.020
EMARK   3    BOND ANGLES REFINED ATOMS   (DEGREES): 4022 ; 1.612 ; 1.948
EMARK   3    BOND ANGLES OTHERS          (DEGREES): 5944 ; 0.832 ; 3.000
EMARK   3    TORSION ANGLES, PERIOD 1    (DEGREES):  350 ; 4.024 ; 3.000
EMARK   3    TORSION ANGLES, PERIOD 3    (DEGREES):  512 ;18.015 ;15.000
EMARK   3    CHIRAL-CENTER RESTRAINTS      (A**3):  413 ; 0.097 ; 0.200
EMARK   3    GENERAL PLANES REFINED ATOMS      (A): 3315 ; 0.006 ; 0.020
EMARK   3    GENERAL PLANES OTHERS             (A):  602 ; 0.002 ; 0.020
EMARK   3    NON-BONDED CONTACTS REFINED ATOMS (A):  731 ; 0.232 ; 0.300
EMARK   3    NON-BONDED CONTACTS OTHERS        (A): 2492 ; 0.214 ; 0.300
EMARK   3    H-BOND (X...Y) REFINED ATOMS      (A):  193 ; 0.173 ; 0.500
EMARK   3    H-BOND (X...Y) OTHERS             (A):    6 ; 0.126 ; 0.500
EMARK   3    POTENTIAL METAL-ION REFINED ATOMS (A):    2 ; 0.054 ; 0.500
EMARK   3    SYMMETRY VDW REFINED ATOMS        (A):   15 ; 0.194 ; 0.300
EMARK   3    SYMMETRY VDW OTHERS               (A):   54 ; 0.255 ; 0.300
EMARK   3    SYMMETRY H-BOND REFINED ATOMS     (A):    7 ; 0.244 ; 0.500
EMARK   3    SYMMETRY H-BOND OTHERS            (A):    1 ; 0.053 ; 0.500
EMARK   3
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REMARK   3 ISOTROPIC THERMAL FACTOR RESTRAINTS.    . COUNT    RMS    WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED ATOMS  (A**2): 1767 ; 0.761 ; 1.500
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS (A**2): 2846 ; 1.421 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS  (A**2): 1190 ; 2.220 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS (A**2): 1176 ; 3.678 ; 4.500
REMARK   3
REMARK   3 NCS RESTRAINTS STATISTICS
REMARK   3  NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3 TLS DETAILS
REMARK   3  NUMBER OF TLS GROUPS  :    1
REMARK   3
REMARK   3  TLS GROUP :     1
REMARK   3   NUMBER OF COMPONENTS GROUP :    2
REMARK   3   COMPONENTS       C SSSEQI   TO  C SSSEQI
REMARK   3   RESIDUE RANGE :   A    15      A    451
REMARK   3   RESIDUE RANGE :   S   795      S    822
REMARK   3   ORIGIN FOR THE GROUP (A):  22.5990  26.9200  28.6340
REMARK   3   T TENSOR
REMARK   3     T11:   0.1903 T22:   0.0302
REMARK   3     T33:   0.0452 T12:  -0.0025
REMARK   3     T13:  -0.0536 T23:   0.0309
REMARK   3   L TENSOR
REMARK   3     L11:   0.7638 L22:   2.2674
REMARK   3     L33:   1.0629 L12:   0.7977
REMARK   3     L13:   0.4200 L23:   1.0769
REMARK   3   S TENSOR
REMARK   3     S11:   0.0306 S12:  -0.1225 S13:  -0.0490
REMARK   3     S21:   0.1656 S22:   0.0303 S23:   0.0478
REMARK   3     S31:   0.2046 S32:   0.0231 S33:  -0.0609
REMARK   3
REMARK   3 BULK SOLVENT MODELLING.
REMARK   3  METHOD USED : BABINET MODEL WITH MASK
REMARK   3  PARAMETERS FOR MASK CALCULATION
REMARK   3  VDW PROBE RADIUS    :   1.40
REMARK   3  ION PROBE RADIUS    :   0.80
REMARK   3  SHRINKAGE RADIUS    :   0.80
REMARK   3
REMARK   3 OTHER REFINEMENT REMARKS:
REMARK   3 HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS
REMARK   4
REMARK   4 1H2M COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY EBI   ON 12-AUG-2002.
REMARK 100 THE EBI ID CODE IS EBI-11173.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200   EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200   DATE OF DATA COLLECTION        : 15-MAY-2002
REMARK 200   TEMPERATURE          (KELVIN) : 100
REMARK 200   PH                             : 7.5
REMARK 200   NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200   SYNCHROTRON            (Y/N) : Y
REMARK 200   RADIATION SOURCE               : SRS BEAMLINE PX9.6
REMARK 200   BEAMLINE                       : PX9.6
REMARK 200   X-RAY GENERATOR MODEL          : NULL
REMARK 200   MONOCHROMATIC OR LAUE   (M/L) : M
REMARK 200   WAVELENGTH OR RANGE      (A) : 0.87
REMARK 200   MONOCHROMATOR                  : NULL
REMARK 200   OPTICS                         : NULL
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REMARK 200
REMARK 200 DETECTOR TYPE                          : ADSC QUANTUM 4
REMARK 200 DETECTOR MANUFACTURER                  : ADSC
REMARK 200 INTENSITY-INTEGRATION SOFTWARE : MOSFLM
REMARK 200 DATA SCALING SOFTWARE                  : SCALA
REMARK 200
REMARK 200 NUMBER OF UNIQUE REFLECTIONS   : 20058
REMARK 200 RESOLUTION RANGE HIGH      (A) : 2.50
REMARK 200 RESOLUTION RANGE LOW       (A) : 87.71
REMARK 200 REJECTION CRITERIA  (SIGMA(I)) : NONE
REMARK 200
REMARK 200 OVERALL.
REMARK 200  COMPLETENESS FOR RANGE     (%) : 99.7
REMARK 200  DATA REDUNDANCY                : 6.5
REMARK 200  R MERGE                    (I) : 0.050
REMARK 200  R SYM                      (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET : 10.7
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.50
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.64
REMARK 200  COMPLETENESS FOR SHELL     (%) : 97.9
REMARK 200  DATA REDUNDANCY IN SHELL       : 4.4
REMARK 200  R MERGE FOR SHELL          (I) : 0.289
REMARK 200  R SYM FOR SHELL            (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL         : 2.6
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: NULL
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS  (%): 63
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.4
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 1.2M AMMONIUM SULPHATE,
REMARK 280  4% PEG400, 0.1M HEPES PH7.5, 11MG/ML PROTEIN WITH
REMARK 280  1MM FE(II), 2.5MM NOG AND 2.5MM PEPTIDE
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 41 21 2
REMARK 290
REMARK 290      SYMOP    SYMMETRY
REMARK 290      NNNMMM   OPERATOR
REMARK 290      1555     X,Y,Z
REMARK 290      2555     -X,-Y,1/2+Z
REMARK 290      3555     1/2-Y,1/2+X,1/4+Z
REMARK 290      4555     1/2+Y,1/2-X,3/4+Z
REMARK 290      5555     1/2-X,1/2+Y,1/4-Z
REMARK 290      6555     1/2+X,1/2-Y,3/4-Z
REMARK 290      7555     Y,X,-Z
REMARK 290      8555     -Y,-X,1/2-Z
REMARK 290
REMARK 290      WHERE NNN -> OPERATOR NUMBER
REMARK 290            MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
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REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290      SMTRY1   1  1.000000  0.000000  0.000000        0.00000
REMARK 290      SMTRY2   1  0.000000  1.000000  0.000000        0.00000
REMARK 290      SMTRY3   1  0.000000  0.000000  1.000000        0.00000
REMARK 290      SMTRY1   2 -1.000000  0.000000  0.000000        0.00000
REMARK 290      SMTRY2   2  0.000000 -1.000000  0.000000        0.00000
REMARK 290      SMTRY3   2  0.000000  0.000000  1.000000       74.13000
REMARK 290      SMTRY1   3  0.000000 -1.000000  0.000000       43.12450
REMARK 290      SMTRY2   3  1.000000  0.000000  0.000000       43.12450
REMARK 290      SMTRY3   3  0.000000  0.000000  1.000000       37.06500
REMARK 290      SMTRY1   4  0.000000  1.000000  0.000000       43.12450
REMARK 290      SMTRY2   4 -1.000000  0.000000  0.000000       43.12450
REMARK 290      SMTRY3   4  0.000000  0.000000  1.000000      111.19500
REMARK 290      SMTRY1   5 -1.000000  0.000000  0.000000       43.12450
REMARK 290      SMTRY2   5  0.000000  1.000000  0.000000       43.12450
REMARK 290      SMTRY3   5  0.000000  0.000000 -1.000000       37.06500
REMARK 290      SMTRY1   6  1.000000  0.000000  0.000000       43.12450
REMARK 290      SMTRY2   6  0.000000 -1.000000  0.000000       43.12450
REMARK 290      SMTRY3   6  0.000000  0.000000 -1.000000      111.19500
REMARK 290      SMTRY1   7  0.000000  1.000000  0.000000        0.00000
REMARK 290      SMTRY2   7  1.000000  0.000000  0.000000        0.00000
REMARK 290      SMTRY3   7  0.000000  0.000000 -1.000000        0.00000
REMARK 290      SMTRY1   8  0.000000 -1.000000  0.000000        0.00000
REMARK 290      SMTRY2   8 -1.000000  0.000000  0.000000        0.00000
REMARK 290      SMTRY3   8  0.000000  0.000000 -1.000000       74.13000
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF   2 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 300
REMARK 300 QUATERNARY STRUCTURE FOR THIS ENTRY: TETRAMERIC
REMARK 300
REMARK 300 THE PROTEIN IS A HOMODIMER FORMED BY CHAIN A.
REMARK 300 A HETERODIMERIC ASSOCIATION OF CHAIN A WITH CHAIN S
REMARK 300 PRODUCES A TETRAMER.
REMARK 300
REMARK 300 THE BURIED SURFACE AREA SHOWN BELOW IS AN AVERAGE
REMARK 300 CALCULATED FOR THE HETEROTETRAMER AND DOES NOT
REMARK 300 CORRESPOND TO THE BURIED SURFACE AREA FOR THE
REMARK 300 HOMODIMER OF CHAIN A
REMARK 300
REMARK 300 THE HETERO-ASSEMBLY DESCRIBED BY REMARK 350 APPEARS
REMARK 300 TO BE A CASE OF STRONG CRYSTAL PACKING WITH
REMARK 300 THE MEAN DIFFERENCE IN ACCESSIBLE SURFACE AREA PER
REMARK 300 CHAIN BETWEEN THE ISOLATED CHAIN AND THAT FOR
REMARK 300 THE CHAIN IN THE COMPLEX IS     2149.4 ANGSTROM**2
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE:  1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A, S
REMARK 350    BIOMT1   1  1.000000  0.000000  0.000000        0.00000
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REMARK 350   BIOMT2   1  0.000000  1.000000  0.000000        0.00000
REMARK 350   BIOMT3   1  0.000000  0.000000  1.000000        0.00000
REMARK 350   BIOMT1   2  0.000000 -1.000000  0.000000       86.24900
REMARK 350   BIOMT2   2 -1.000000  0.000000  0.000000       86.24900
REMARK 350   BIOMT3   2  0.000000  0.000000 -1.000000       74.13000
REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A    1
REMARK 465     ALA A    2
REMARK 465     ALA A    3
REMARK 465     THR A    4
REMARK 465     ALA A    5
REMARK 465     ALA A    6
REMARK 465     GLU A    7
REMARK 465     ALA A    8
REMARK 465     VAL A    9
REMARK 465     ALA A   10
REMARK 465     SER A   11
REMARK 465     GLY A   12
REMARK 465     SER A   13
REMARK 465     GLY A   14
REMARK 465     LYS A  304
REMARK 465     ARG A  305
REMARK 465     ILE A  306
REMARK 465     PRO S  775
REMARK 465     SER S  776
REMARK 465     ASP S  777
REMARK 465     LEU S  778
REMARK 465     ALA S  779
REMARK 465     CYS S  780
REMARK 465     ARG S  781
REMARK 465     LEU S  782
REMARK 465     LEU S  783
REMARK 465     GLY S  784
REMARK 465     GLN S  785
REMARK 465     SER S  786
REMARK 465     MET S  787
REMARK 465     ASP S  788
REMARK 465     GLU S  789
REMARK 465     SER S  790
REMARK 465     GLY S  791
REMARK 465     LEU S  792
REMARK 465     PRO S  793
REMARK 465     GLN S  794
REMARK 465     GLN S  807
REMARK 465     GLY S  808
REMARK 465     SER S  809
REMARK 465     ARG S  810
REMARK 465     ASN S  811
REMARK 465     LEU S  812
REMARK 465     ASP S  823
REMARK 465     GLN S  824
REMARK 465     VAL S  825
REMARK 465     ASN S  826
REMARK 470
REMARK 470 MISSING ATOM
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REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS (M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI  ATOMS
REMARK 470     GLU A  15    CG   CD   OE1  OE2
REMARK 470     GLU A  29    CG   CD   OE1  OE2
REMARK 470     ASN A  87    CG   OD1  ND2
REMARK 470     LYS A 106    CD   CE   NZ
REMARK 470     LYS A 115    CG   CD   CE   NZ
REMARK 470     ARG A 117    CG   CD   NE   CZ   NH1  NH2
REMARK 470     GLN A 133    CG   CD   OE1  NE2
REMARK 470     GLN A 136    CG   CD   OE1  NE2
REMARK 470     GLN A 137    CG   CD   OE1  NE2
REMARK 470     ARG A 156    CG   CD   NE   CZ   NH1  NH2
REMARK 470     LYS A 157    CD   CE   NZ
REMARK 470     LYS A 311    CG   CD   CE   NZ
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500   M RES CSSEQI ATM1   ATM2    ATM3
REMARK 500     LEU A 227   CA  -  CB  -  CG  ANGL. DEV. = -11.0 DEGREES
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD AND BY MORE THAN 0.150 ANGSTROMS (M=MODEL
REMARK 500 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 500 NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,1X,2(A4,A1,3X),12X,F5.3)
REMARK 500
REMARK 500 EXPECTED VALUESS: ENGH AND HUBER, 1991
REMARK 500
REMARK 500   M RES CSSEQI ATM1   RES CSSEQI ATM2    DEVIATION
REMARK 500     MET A 343   SD     MET A 343  CE       -0.209
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500   ATM1 RES C  SSEQI    ATM2 RES C  SSEQI              DISTANCE
REMARK 500
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REMARK 500 · O    ALA A  300      OH   TYR S   798                    2.09
REMARK 525
REMARK 525 SOLVENT
REMARK 525
REMARK 525 THE SOLVENT MOLECULES ARE GIVEN CHAIN IDENTIFIERS TO
REMARK 525 INDICATE THE PROTEIN CHAIN TO WHICH THEY ARE MOST CLOSELY
REMARK 525 ASSOCIATED WITH:
REMARK 525    PROTEIN CHAIN  SOLVENT CHAIN
REMARK 525       A                Z
REMARK 525       S                H
REMARK 600
REMARK 600 HETEROGEN
REMARK 600      ·
REMARK 600 FOR METAL ATOM ZN    ZN A1350   THE COORDINATION ANGLES ARE:
REMARK 600 1 HIS    199A  NE2
REMARK 600 2 ASP    201A  OD2       103.4
REMARK 600 3 HIS    279A  NE2        84.2  88.5
REMARK 600 4 OGA   1351A  O2        169.0  87.2  99.0
REMARK 600 5 OGA   1351A  O2'        86.3 169.1  97.3  82.8
REMARK 600                            1     2     3     4
REMARK 700
REMARK 700 SHEET
REMARK 700 THE SHEET STRUCTURE OF THIS MOLECULE IS BIFURCATED. IN
REMARK 700 ORDER TO REPRESENT THIS FEATURE IN THE SHEET RECORDS BELOW,
REMARK 700 TWO SHEETS ARE DEFINED.
REMARK 800
REMARK 800 SITE
REMARK 800 SITE_IDENTIFIER: ZNA
REMARK 800 SITE_DESCRIPTION: ZN BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: OGA
REMARK 800 SITE_DESCRIPTION: OGA BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SA1
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SA2
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1D7G    RELATED DB: PDB
REMARK 900  A MODEL FOR THE COMPLEX BETWEEN THE
REMARK 900 . HYPOXIA-INDUCIBLE FACTOR-1 (HIF-1) AND ITS
REMARK 900    CONSENSUS DEOXYRIBONUCLEIC ACID SEQUENCE
REMARK 900 RELATED ID: 1H2K    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900  WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2L    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900  WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2N    RELATED DB: PDB
REMARK 900  FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900  WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1L8C    RELATED DB: PDB
REMARK 900    STRUCTURAL BASIS FOR HIF-1ALPHA/CBP
REMARK 900    RECOGNITION IN THECELLULAR HYPOXIC RESPONSE
REMARK 900 RELATED ID: 1LM8    RELATED DB: PDB
REMARK 900    STRUCTURE OF A HIF-1A-PVHL-ELONGINB-
REMARK 900    ELONGINC COMPLEX
REMARK 900 RELATED ID: 1LQB    RELATED DB: PDB
REMARK 900    CRYSTAL STRUCTURE OF A HYDROXYLATED HIF-1
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REMARK 900   ALPHA PEPTIDEBOUND TO THE PVHL/ELONGIN-C/
REMARK 900   ELONGIN-B COMPLEX
DBREF  1H2M A     1    349  SWS    Q969Q7   Q969Q7          1      349
DBREF  1H2M S   775    826  SWS    Q16665   HIFA_HUMAN     775      826
SEQRES   1 A  349  MET ALA ALA THR ALA ALA GLU ALA VAL ALA SER GLY SER
SEQRES   2 A  349  GLY GLU PRO ARG GLU GLU ALA GLY ALA LEU GLY PRO ALA
SEQRES   3 A  349  TRP ASP GLU SER GLN LEU ARG SER TYR SER PHE PRO THR
SEQRES   4 A  349  ARG PRO ILE PRO ARG LEU SER GLN SER ASP PRO ARG ALA
SEQRES   5 A  349  GLU GLU LEU ILE GLU ASN GLU GLU PRO VAL VAL LEU THR
SEQRES   6 A  349  ASP THR ASN LEU VAL TYR PRO ALA LEU LYS TRP ASP LEU
SEQRES   7 A  349  GLU TYR LEU GLN GLU ASN ILE GLY ASN GLY ASP PHE SER
SEQRES   8 A  349  VAL TYR SER ALA SER THR HIS LYS PHE LEU TYR TYR ASP
SEQRES   9 A  349  GLU LYS LYS MET ALA ASN PHE GLN ASN PHE LYS PRO ARG
SEQRES  10 A  349  SER ASN ARG GLU GLU MET LYS PHE HIS GLU PHE VAL GLU
SEQRES  11 A  349  LYS LEU GLN ASP ILE GLN GLN ARG GLY GLY GLU GLU ARG
SEQRES  12 A  349  LEU TYR LEU GLN GLN THR LEU ASN ASP THR VAL GLY ARG
SEQRES  13 A  349  LYS ILE VAL MET ASP PHE LEU GLY PHE ASN TRP ASN TRP
SEQRES  14 A  349  ILE ASN LYS GLN GLN GLY LYS ARG GLY TRP GLY GLN LEU
SEQRES  15 A  349  THR SER ASN LEU LEU LEU ILE GLY MET GLU GLY ASN VAL
SEQRES  16 A  349  THR PRO ALA HIS TYR ASP GLU GLN GLN ASN PHE PHE ALA
SEQRES  17 A  349  GLN ILE LYS GLY TYR LYS ARG CYS ILE LEU PHE PRO PRO
SEQRES  18 A  349  ASP GLN PHE GLU CYS LEU TYR PRO TYR PRO VAL HIS HIS
SEQRES  19 A  349  PRO CYS ASP ARG GLN SER GLN VAL ASP PHE ASP ASN PRO
SEQRES  20 A  349  ASP TYR GLU ARG PHE PRO ASN PHE GLN ASN VAL VAL GLY
SEQRES  21 A  349  TYR GLU THR VAL VAL GLY PRO GLY ASP VAL LEU TYR ILE
SEQRES  22 A  349  PRO MET TYR TRP TRP HIS HIS ILE GLU SER LEU LEU ASN
SEQRES  23 A  349  GLY GLY ILE THR ILE THR VAL ASN PHE TRP TYR LYS GLY
SEQRES  24 A  349  ALA PRO THR PRO LYS ARG ILE GLU TYR PRO LEU LYS ALA
SEQRES  25 A  349  HIS GLN LYS VAL ALA ILE MET ARG ASN ILE GLU LYS MET
SEQRES  26 A  349  LEU GLY GLU ALA LEU GLY ASN PRO GLN GLU VAL GLY PRO
SEQRES  27 A  349  LEU LEU ASN THR MET ILE LYS GLY ARG TYR ASN
SEQRES   1 S   52  PRO SER ASP LEU ALA CYS ARG LEU LEU GLY GLN SER MET
SEQRES   2 S   52  ASP GLU SER GLY LEU PRO GLN LEU THR SER TYR ASP CYS
SEQRES   3 S   52  GLU VAL ASN ALA PRO ILE GLN GLY SER ARG ASN LEU LEU
SEQRES   4 S   52  GLN GLY GLU GLU LEU LEU ARG ALA LEU ASP GLN VAL ASN
HET     ZN  A1350         1
HET    OGA  A1351        10
HET    SO4  A1352         5
HET    SO4  A1353         5
HETNAM      ZN ZINC ION
HETNAM     OGA N-OXALYOLGLYCINE
HETNAM     SO4 SULFATE ION
FORMUL   3   ZN    ZN1 2+
FORMUL   4  OGA    C4 H5 N1 O5
FORMUL   5  SO4    2(O4 S1 2-)
FORMUL   6  HOH   *99(H2 O1)
HELIX    1   1 ASP A   28  LEU A   32  5                                  5
HELIX    2   2 ASP A   49  ASN A   58  1                                 10
HELIX    3   3 VAL A   70  TRP A   76  5                                  7
HELIX    4   4 ASP A   77  ILE A   85  1                                  9
HELIX    5   5 ASP A  104  GLN A  112  5                                  9
HELIX    6   6 LYS A  124  ARG A  138  1                                 15
HELIX    7   7 GLY A  155  GLY A  164  1                                 10
HELIX    8   8 ASN A  166  ARG A  177  1                                 12
HELIX    9   9 PRO A  220  ASP A  222  5                                  3
HELIX   10  10 GLN A  223  TYR A  228  1                                  6
HELIX   11  11 PHE A  252  VAL A  258  5                                  7
HELIX   12  12 LYS A  311  GLY A  331  1                                 21
HELIX   13  13 ASN A  332  GLN A  334  5                                  3
HELIX   14  14 GLU A  335  LYS A  345  1                                 11
HELIX   15  15 GLN S  814  LEU S  822  1                                  9
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SHEET    1  AA 5 THR A  39  PRO A  41  0
SHEET    2  AA 5 GLY A 260  VAL A 265  1  O  GLY A 260   N  ARG A  40
SHEET    3  AA 5 LYS A 214  PHE A 219 -1  O  LYS A 214   N  VAL A 265
SHEET    4  AA 5 TRP A 278  SER A 283 -1  O  TRP A 278   N  PHE A 219
SHEET    5  AA 5 VAL A 195  HIS A 199 -1  O  THR A 196   N  ILE A 281
SHEET    1  AB 6 ARG A  44  LEU A  45  0
SHEET    2  AB 6 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AB 6 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AB 6 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AB 6 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AB 6 LEU A 182  SER A 184 -1  N  THR A 183   O  TRP A 296
SHEET    1  AC 9 ARG A  44  LEU A  45  0
SHEET    2  AC 9 VAL A  62  LEU A  64  1  O  VAL A  63   N  LEU A  45
SHEET    3  AC 9 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET    4  AC 9 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET    5  AC 9 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET    6  AC 9 LEU A 186  GLY A 190 -1  O  LEU A 186   N  ASN A 294
SHEET    7  AC 9 ARG A 143  THR A 149 -1  O  LEU A 146   N  ILE A 189
SHEET    8  AC 9 PHE A  90  ALA A  95 -1  O  SER A  91   N  GLN A 147
SHEET    9  AC 9 SER A 118  MET A 123 -1  O  ASN A 119   N  SER A  94
LINK         ZN   ZN A1350                 NE2 HIS A 199         1555   1555
LINK         ZN   ZN A1350                 OD2 ASP A 201         1555   1555
LINK         ZN   ZN A1350                 NE2 HIS A 279         1555   1555
LINK         ZN   ZN A1350                 O2  OGA A1351         1555   1555
LINK         ZN   ZN A1350                 O2' OGA A1351         1555   1555
CISPEP   1 TYR A  308    PRO A  309         0           1.05
SITE     1 ZNA  3 HIS A 199  ASP A 201  HIS A 279
SITE     1 OGA 13 TYR A 145  LEU A 188  THR A 196  HIS A 199
SITE     2 OGA 13 ASP A 201  ASN A 205  PHE A 207  LYS A 214
SITE     3 OGA 13 HIS A 279  ILE A 281  ASN A 294  TRP A 296
SITE     4 OGA 13 HOH Z  47
SITE     1 SA1  4 ARG A 138  GLY A 140  GLU A 141  GLU A 142
SITE     1 SA2  5 ARG A 143  GLU A 192  GLY A 193  LEU A 285
SITE     2 SA2  5 ASN A 286
CRYST1   86.249   86.249  148.260  90.00   90.00   90.00 P 41 21 2      8
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.011594  0.000000  0.000000        0.00000
SCALE2      0.000000  0.011594  0.000000        0.00000
SCALE3      0.000000  0.000000  0.006745        0.00000
ATOM      1  N   GLU A  15       8.462  32.732   9.880  1.00 78.57           N
ATOM      2  CA  GLU A  15       7.114  32.108   9.773  1.00 78.75           C
ATOM      3  C   GLU A  15       7.207  30.654  10.192  1.00 78.42           C
ATOM      4  O   GLU A  15       8.067  29.928   9.714  1.00 78.63           O
ATOM      5  CB  GLU A  15       6.580  32.219   8.345  1.00 78.95           C
ATOM      6  N   PRO A  16       6.316  30.214  11.067  1.00 78.20           N
ATOM      7  CA  PRO A  16       6.376  28.840  11.584  1.00 77.89           C
ATOM      8  C   PRO A  16       6.328  27.796  10.467  1.00 77.35           C
ATOM      9  O   PRO A  16       5.541  27.888   9.527  1.00 76.95           O
ATOM     10  CB  PRO A  16       5.146  28.746  12.493  1.00 78.00           C
ATOM     11  CG  PRO A  16       4.763  30.167  12.790  1.00 78.28           C
ATOM     12  CD  PRO A  16       5.173  30.969  11.605  1.00 78.24           C
ATOM     13  N   ARG A  17       7.184  26.796  10.580  1.00 76.88           N
ATOM     14  CA  ARG A  17       7.264  25.749   9.575  1.00 76.63           C
ATOM     15  C   ARG A  17       6.005  24.891   9.539  1.00 75.45           C
ATOM     16  O   ARG A  17       5.247  24.836  10.505  1.00 75.40           O
ATOM     17  CB  ARG A  17       8.444  24.820   9.875  1.00 77.06           C
ATOM     18  CG  ARG A  17       9.816  25.481   9.900  1.00 78.68           C
ATOM     19  CD  ARG A  17      10.954  24.522  10.293  1.00 80.53           C
ATOM     20  NE  ARG A  17      10.908  24.086  11.699  1.00 82.60           N
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ATOM	21	CZ	ARG	A	17	11.401	24.776	12.744	1.00	84.27	C
ATOM	22	NH1	ARG	A	17	11.980	25.968	12.584	1.00	83.33	N
ATOM	23	NH2	ARG	A	17	11.311	24.268	13.967	1.00	85.10	N
ATOM	24	N	GLU	A	18	5.796	24.209	8.421	1.00	74.01	N
ATOM	25	CA	GLU	A	18	4.692	23.274	8.319	1.00	72.99	C
ATOM	26	C	GLU	A	18	5.193	21.855	8.607	1.00	71.43	C
ATOM	27	O	GLU	A	18	6.210	21.421	8.061	1.00	70.71	O
ATOM	28	CB	GLU	A	18	4.033	23.352	6.938	1.00	73.29	C
ATOM	29	CG	GLU	A	18	3.333	24.677	6.659	1.00	73.91	C
ATOM	30	CD	GLU	A	18	1.949	24.794	7.283	1.00	74.30	C
ATOM	31	OE1	GLU	A	18	1.355	23.776	7.692	1.00	74.07	O
ATOM	32	OE2	GLU	A	18	1.444	25.929	7.356	1.00	75.76	O
ATOM	33	N	GLU	A	19	4.482	21.157	9.491	1.00	69.89	N
ATOM	34	CA	GLU	A	19	4.786	19.764	9.818	1.00	68.89	C
ATOM	35	C	GLU	A	19	4.393	18.854	8.661	1.00	66.65	C
ATOM	36	O	GLU	A	19	3.324	19.011	8.065	1.00	65.92	O
ATOM	37	CB	GLU	A	19	4.058	19.311	11.096	1.00	69.41	C
ATOM	38	CG	GLU	A	19	4.544	19.996	12.370	1.00	72.06	C
ATOM	39	CD	GLU	A	19	4.308	19.194	13.657	1.00	76.41	C
ATOM	40	OE1	GLU	A	19	3.855	18.016	13.609	1.00	78.21	O
ATOM	41	OE2	GLU	A	19	4.590	19.758	14.746	1.00	79.64	O
ATOM	42	N	ALA	A	20	5.283	17.919	8.349	1.00	64.54	N
ATOM	43	CA	ALA	A	20	5.067	16.921	7.303	1.00	63.03	C
ATOM	44	C	ALA	A	20	3.735	16.225	7.449	1.00	61.23	C
ATOM	45	O	ALA	A	20	3.303	15.903	8.556	1.00	60.61	O
ATOM	46	CB	ALA	A	20	6.177	15.889	7.312	1.00	62.82	C
ATOM	47	N	GLY	A	21	3.087	16.002	6.316	1.00	59.29	N
ATOM	48	CA	GLY	A	21	1.833	15.289	6.304	1.00	58.26	C
ATOM	49	C	GLY	A	21	0.651	16.200	6.530	1.00	57.44	C
ATOM	50	O	GLY	A	21	-0.416	15.739	6.873	1.00	56.42	O
ATOM	51	N	ALA	A	22	0.858	17.500	6.341	1.00	57.28	N
ATOM	52	CA	ALA	A	22	-0.182	18.509	6.492	1.00	56.92	C
ATOM	53	C	ALA	A	22	-0.737	18.544	7.909	1.00	56.53	C
ATOM	54	O	ALA	A	22	-1.926	18.737	8.108	1.00	56.32	O
ATOM	55	CB	ALA	A	22	-1.285	18.277	5.488	1.00	57.10	C
ATOM	56	N	LEU	A	23	0.133	18.369	8.898	1.00	56.25	N
ATOM	57	CA	LEU	A	23	-0.306	18.397	10.289	1.00	56.07	C
ATOM	58	C	LEU	A	23	-0.385	19.811	10.827	1.00	55.03	C
ATOM	59	O	LEU	A	23	-0.638	20.037	11.998	1.00	54.89	O
ATOM	60	CB	LEU	A	23	0.583	17.519	11.149	1.00	56.05	C
ATOM	61	CG	LEU	A	23	0.445	16.067	10.678	1.00	58.06	C
ATOM	62	CD1	LEU	A	23	1.307	15.080	11.478	1.00	59.22	C
ATOM	63	CD2	LEU	A	23	-1.030	15.653	10.735	1.00	59.53	C
ATOM	64	N	GLY	A	24	-0.202	20.768	9.941	1.00	54.17	N
ATOM	65	CA	GLY	A	24	-0.337	22.151	10.305	1.00	53.43	C
ATOM	66	C	GLY	A	24	0.932	22.758	10.834	1.00	52.71	C
ATOM	67	O	GLY	A	24	2.025	22.189	10.807	1.00	52.28	O
ATOM	68	N	PRO	A	25	0.775	23.965	11.324	1.00	51.60	N
ATOM	69	CA	PRO	A	25	1.908	24.695	11.858	1.00	50.67	C
ATOM	70	C	PRO	A	25	2.310	24.047	13.168	1.00	49.52	C
ATOM	71	O	PRO	A	25	1.481	23.648	13.982	1.00	47.61	O
ATOM	72	CB	PRO	A	25	1.366	26.110	12.065	1.00	50.61	C
ATOM	73	CG	PRO	A	25	-0.109	26.034	11.931	1.00	50.61	C
ATOM	74	CD	PRO	A	25	-0.493	24.689	11.463	1.00	51.58	C
ATOM	75	N	ALA	A	26	3.616	23.922	13.321	1.00	49.47	N
ATOM	76	CA	ALA	A	26	4.218	23.390	14.526	1.00	49.29	C
ATOM	77	C	ALA	A	26	3.894	24.266	15.759	1.00	47.94	C
ATOM	78	O	ALA	A	26	3.646	23.735	16.836	1.00	48.27	O
ATOM	79	CB	ALA	A	26	5.712	23.288	14.328	1.00	49.68	C
ATOM	80	N	TRP	A	27	3.864	25.581	15.592	1.00	45.91	N
ATOM	81	CA	TRP	A	27	3.494	26.487	16.683	1.00	45.16	C

ATOM	82	C	TRP	A	27	3.003	27.818	16.107	1.00	44.47	C
ATOM	83	O	TRP	A	27	2.985	27.981	14.901	1.00	44.30	O
ATOM	84	CB	TRP	A	27	4.719	26.727	17.568	1.00	44.91	C
ATOM	85	CG	TRP	A	27	5.916	26.910	16.737	1.00	42.67	C
ATOM	86	CD1	TRP	A	27	6.702	25.934	16.197	1.00	43.38	C
ATOM	87	CD2	TRP	A·	27	6.411	28.129	16.255	1.00	38.70	C
ATOM	88	NE1	TRP	A	27	7.690	26.494	15.425	1.00	41.56	N
ATOM	89	CE2	TRP	A	27	·7.532	27.847	15.452	1.00	39.59	C
ATOM	90	CE3	TRP	A	27	6.039	29.442	16.431	1.00	38.28	C
ATOM	91	CZ2	TRP	A	27	8.284	28.827	14.861	1.00	39.74	C
ATOM	92	CZ3	TRP	A	27	6.781	30.409	15.849	1.00	39.48	C
ATOM	93	CH2	TRP	A	27	7.884	30.104	15.057	1.00	40.17	C
ATOM	94	N	ASP	A	28	2.580	28.760	16.941	1.00	43.91	N
ATOM	95	CA	ASP	A	28	2.230	30.079	16.417	1.00	43.87	C
ATOM	96	C	ASP	A	28	2.750	31.161	17.305	1.00	42.33	C·
ATOM	97	O	ASP	A	28	3.191	30.901	18.409	1.00	42.11	O
ATOM	98	CB	ASP	A	28	0.722	30.251	16.199	1.00	44.82	C
ATOM	99	CG	ASP	A	28	-0.052	30.162	17.462	1.00	47.87	C
ATOM	100	OD1	ASP	A	28	-0.240	31.236	18.108	1.00	50.91	O
ATOM	101	OD2	ASP	A	28	-0.501	29.054	17.877	1.00	49.06	O
ATOM	102	N	GLU	A	29	2.713	32.385	16.790	1.00	41.29	N
ATOM	103	CA	GLU	A	29	3.208	33.586	17.499	1.00	39.69	C
ATOM	104	C	GLU	A	29	2.685	33.711	18.917	1.00	37.94	C
ATOM	105	O	GLU	A	29	3.415	34.069	19.801	1.00	37.26	O
ATOM	106	CB	GLU	A	29	2.840	34.812	16.735	1.00	39.59	C
ATOM	107	N	SER	A·	30	1.427	33.371	19.135	1.00	36.78	N
ATOM	108	CA	SER	A	30	0.810	33.558	20.443	1.00	36.13	C
ATOM	109	C	SER	A	30	1.501	32.756	21.517	1.00	35.30	C
ATOM	110	O	SER	A	30	1.252	32.968	22.678	1.00	35.21	O
ATOM	111	CB	SER	A	30	-0.686	33.180	20.406	1.00	35.84	C
ATOM	112	OG	SER	A	30	-0.901	31.762	20.450	1.00	36.93	O
ATOM	113	N	GLN	A	31	2.326	31.795	21.116	1.00	35.24	N
ATOM	114	CA	GLN	A	31	3.021	30.918	22.060	1.00	34.89	C
ATOM	115	C	GLN	A	31	4.366	31.506	22.487	1.00	34.60	C
ATOM	116	O	GLN	A	31	5.010	30.969	23.365	1.00	34.18	O
ATOM	117	CB	GLN	A	31	3.224	29.513	21.473	1.00	34.65	C
ATOM	118	CG	GLN	A	31	1.969	28.649	21.402	1.00	34.74	C
ATOM	119	CD	GLN	A	31	2.212	27.322	20.707	1.00	33.47	C
ATOM	120	OE1	GLN	A	31	2.215	27.249	19.476	1.00	32.57	O
ATOM	121	NE2	GLN	A	31	2.442	26.278	21.492·	1.00·	32.95	N
ATOM	122	N	LEU	A	32	4.753	32.632	21.895	1.00	34.85	N
ATOM	123	CA	LEU	A	32	6.016	33.293	22.212	1.00	35.01	C
ATOM	124	C	LEU	A	32	5.798	34.391	23.223	1.00	34.91	C
ATOM	125	O	LEU	A	32	4.834	35.134	23.125	1.00	35.83	O
ATOM	126	CB	LEU	A	32	6.631	33.885	20.945	1.00	34.96	C
ATOM	127	CG	LEU	A	32	6.995	32.860	19.849	1.00	36.03	C
ATOM	128	CD1	LEU	A	32	7.691	33.525	18.701	1.00	36.15	C
ATOM	129	CD2	LEU	A	32	7.855	31.780	20.377	1.00	35.18	C
ATOM	130	N	ARG	A	33	6.675	34.500	24.209	1.00	34.49	N
ATOM	131	CA	ARG	A	33	6.564	35.591	25.170	1.00	34.33	C
ATOM	132	C	ARG	A	33	7.005	36.867	24.460	1.00	34.37	C
ATOM	133	O	ARG	A	33	7.733	36.815	23.498	1.00	34.87	O
ATOM	134	CB	ARG	A	33	7.442	35.338	26.394	1.00	34.16	C
ATOM	135	CG	ARG	A	33	7.056	34.124	27.212	1.00	32.83	C
ATOM	136	CD	ARG	A	33	7.951	33.894	28.428	1.00	33.34	C
ATOM	137	NE	ARG	A	33	7.413.	32.820	29.252	1.00	34.91	N
ATOM	138	CZ	ARG	A	33	6.445	32.963	30.137	1.00	36.53	C
ATOM	139	NH1	ARG	A	33	5.900	34.144	30.382	1.00	34.89	N
ATOM	140	NH2	ARG	A	33	6.027	31.905	30.795	1.00	39.39	N
ATOM	141	N	SER	A	34	6.608	38.022	24.947	1.00	34.36	N
ATOM	142	CA	SER	A	34	6.944	39.247	24.244	1.00	34.69	C

.M	143	C	SER	A	34	8.002	40.055	24.987	1.00	33.26	C
:OM	144	O	SER	A	34	7.958	40.142	26.200	1.00	33.50	O
?OM	145	CB	SER	A	34	5.698	40.096	24.143	1.00	35.23	C
?OM	146	OG	SER	A	34	5.586	40.744	25.393	1.00	39.99	O
?	147	N	TYR	A	35	8.911	40.682	24.252	1.00	32.38	N
?OM	148	CA	TYR	A	35	10.080	41.329	24.843	1.00	32.03	C
?OM	149	C	TYR	A	35	10.339	42.675	24.193	1.00	32.52	C
?OM	150	O	TYR	A	35	9.763	42.979	23.172	1.00	32.78	O
?OM	151	CB	TYR	A	35	11.290	40.422	24.686	1.00	31.20	C
?OM	152	CG	TYR	A	35	11.139	39.161	25.482	1.00	30.69	C
?OM	153	CD1	TYR	A	35	10.935	39.215	26.853	1.00	30.40	C
?OM	154	CD2	TYR	A	35	11.186	37.915	24.875	1.00	30.34	C
?OM	155	CE1	TYR	A	35	10.804	38.054	27.609	1.00	31.74	C
?OM	156	CE2	TYR	A	35	11.050	36.741	25.617	1.00	32.05	C
?OM	157	CZ	TYR	A	35	10.858	36.812	26.991	1.00	31.98	C
?OM	158	OH	TYR	A	35	10.687	35.658	27.742	1.00	30.13	O
?OM	159	N	SER	A	36	11.240	43.463	24.761	1.00	33.06	N
?OM	160	CA	SER	A	36	11.469	44.838	24.289	1.00	32.95	C
?OM	161	C	SER	A	36	12.469	44.977	23.159	1.00	32.65	C
?OM	162	O	SER	A	36	12.705	46.084	22.674	1.00	33.04	O
TOM	163	CB	SER	A	36	11.979	45.698	25.438	1.00	32.92	C
TOM	164	OG	SER	A	36	13.272	45.325	25.844	1.00	33.05	O
TOM	165	N	PHE	A	37	13.041	43.880	22.711	1.00	31.44	N
TOM	166	CA	PHE	A	37	14.100	43.988	21.740	1.00	31.55	C
TOM	167	C	PHE	A	37	13.784	43.269	20.444	1.00	31.69	O
TOM	168	O	PHE	A	37	13.020	42.326	20.386	1.00	32.65	C
TOM	169	CB	PHE	A	37	15.421	43.431	22.339	1.00	30.68	C
TOM	170	CG	PHE	A	37	15.275	42.054	22.890	1.00	30.10	C
TOM	171	CD1	PHE	A	37	15.329	40.967	22.060	1.00	28.43	C
TOM	172	CD2	PHE	A	37	15.022	41.852	24.231	1.00	29.43	C
TOM	173	CE1	PHE	A	37	15.168	39.679	22.564	1.00	31.59	C
TOM	174	CE2	PHE	A	37	14.852	40.580	24.733	1.00	30.52	C
TOM	175	CZ	PHE	A	37	14.927	39.495	23.915	1.00	31.81	C
TOM	176	N	PRO	A	38	14.403	43.721	19.384	1.00	31.70	N
TOM	177	CA	PRO	A	38	14.268	43.036	18.106	1.00	31.23	C
TOM	178	C	PRO	A	38	15.231	41.895	17.984	1.00	31.71	C
TOM	179	O	PRO	A	38	16.205	41.880	18.743	1.00	31.59	O
TOM	180	CB	PRO	A	38	14.652	44.118	17.117	1.00	31.44	C
TOM	181	CG	PRO	A	38	15.636	45.005	17.922	1.00	32.43	C
TOM	182	CD	PRO	A	38	15.186	44.973	19.320	1.00	30.26	C
TOM	183	N	THR	A	39	14.996	41.008	17.003	1.00	31.90	N
TOM	184	CA	THR	A	39	15.868	39.891	16.702	1.00	32.00	C
TOM	185	C	THR	A	39	15.865	39.606	15.203	1.00	32.89	C
TOM	186	O	THR	A	39	14.998	40.048	14.476	1.00	32.28	O
TOM	187	CB	THR	A	39	15.370	38.647	17.377	1.00	32.26	C
TOM	188	OG1	THR	A	39	14.024	38.389	16.949	1.00	30.59	O
TOM	189	CG2	THR	A	39	15.235	38.832	18.905	1.00	32.99	C
TOM	190	N	ARG	A	40	16.855	38.844	14.770	1.00	33.28	N
TOM	191	CA	ARG	A	40	16.980	38.372	13.421	1.00	34.30	C
TOM	192	C	ARG	A	40	17.023	36.853	13.562	1.00	33.77	C
TOM	193	O	ARG	A	40	17.288	36.324	14.614	1.00	34.68	O
TOM	194	CB	ARG	A	40	18.267	38.847	12.795	1.00	34.73	C
TOM	195	CG	ARG	A	40	18.273	40.306	12.451	1.00	41.24	C
TOM	196	CD	ARG	A	40	16.909	40.799	12.022	1.00	48.38	C
TOM	197	NE	ARG	A	40	16.728	41.025	10.597	1.00	51.83	N
TOM	198	CZ	ARG	A	40	15.553	41.291	10.092	1.00	56.70	C
TOM	199	NH1	ARG	A	40	14.501	41.300	10.908	1.00	57.84	N
TOM	200	NH2	ARG	A	40	15.415	41.549	8.795	1.00	60.30	N
TOM	201	N	PRO	A	41	16.663	36.147	12.533	1.00	33.50	N
TOM	202	CA	PRO	A	41	16.646	34.681	12.569	1.00	33.48	C
TOM	203	C	PRO	A	41	18.002	34.010	12.475	1.00	32.72	C

ATOM	204	O	PRO	A	41	18.907	34.475	11.801	1.00	34.64	O
ATOM	205	CB	PRO	A	41	15.800	34.299	11.340	1.00	33.22	C
ATOM	206	CG	PRO	A	41	15.409	35.563	10.675	1.00	33.55	C
ATOM	207	CD	PRO	A	41	16.038	36.717	11.343	1.00	32.95	C
ATOM	208	N	ILE	A	42	18.154	32.925	13.192	1.00	30.97	N
ATOM	209	CA	ILE	A	42	19.337	32.144	13.049	1.00	29.87	C
ATOM	210	C	ILE	A	42	19.077	31.289	11.814	1.00	30.07	C
ATOM	211	O	ILE	A	42	17.946	30.857	11.587	1.00	30.17	O
ATOM	212	CB	ILE	A	42	19.477	31.306	14.273	1.00	29.85	C
ATOM	213	CG1	ILE	A	42	19.721	32.215	15.478	1.00	27.79	C
ATOM	214	CG2	ILE	A	42	20.582	30.264	14.105	1.00	30.60	C
ATOM	215	CD1	ILE	A	42	19.565	31.503	16.788	1.00	25.35	C
ATOM	216	N	PRO	A	43	20.085	31.075	10.985	1.00	29.34	N
ATOM	217	CA	PRO	A	43	19.922	30.219	9.823	1.00	29.60	C
ATOM	218	C	PRO	A	43	19.623	28.751	10.176	1.00	30.65	C
ATOM	219	O	PRO	A	43	20.207	28.265	11.160	1.00	31.73	O
ATOM	220	CB	PRO	A	43	21.288	30.310	9.139	1.00	30.00	C
ATOM	221	CG	PRO	A	43	21.933	31.491	9.665	1.00	28.87	C
ATOM	222	CD	PRO	A	43	21.420	31.676	11.047	1.00	28.76	C
ATOM	223	N	ARG	A	44	18.725	28.103	9.419	1.00	30.34	N
ATOM	224	CA	ARG	A	44	18.415	26.693	9.507	1.00	31.59	C
ATOM	225	C	ARG	A	44	18.965	26.050	8.267	1.00	31.44	C
ATOM	226	O	ARG	A	44	18.540	26.359	7.169	1.00	32.24	O
ATOM	227	CB	ARG	A	44	16.923	26.399	9.502	1.00	32.07	C
ATOM	228	CG	ARG	A	44	16.105	27.115	10.563	1.00	36.61	C
ATOM	229	CD	ARG	A	44	14.638	26.534	10.809	1.00	39.09	C
ATOM	230	NE	ARG	A	44	14.350	25.140	10.395	1.00	41.98	N
ATOM	231	CZ	ARG	A	44	14.179	24.099	11.246	1.00	43.25	C
ATOM	232	NH1	ARG	A	44	14.332	24.244	12.561	1.00	40.76	N
ATOM	233	NH2	ARG	A	44	13.864	22.892	10.777	1.00	44.70	N
ATOM	234	N	LEU	A	45	19.878	25.118	8.428	1.00	31.29	N
ATOM	235	CA	LEU	A	45	20.544	24.560	7.294	1.00	30.82	C
ATOM	236	C	LEU	A	45	20.744	23.083	7.470	1.00	31.52	C
ATOM	237	O	LEU	A	45	20.690	22.550	8.597	1.00	31.99	O
ATOM	238	CB	LEU	A	45	21.909	25.221	7.134	1.00	29.63	C
ATOM	239	CG	LEU	A	45	21.873	26.697	6.813	1.00	31.00	C
ATOM	240	CD1	LEU	A	45	23.279	27.338	7.030	1.00	31.79	C
ATOM	241	CD2	LEU	A	45	21.403	26.918	5.378	1.00	31.14	C
ATOM	242	N	SER	A	46	21.004	22.437	6.338	1.00	31.72	N
ATOM	243	CA	SER	A	46	21.345	21.057	6.327	1.00	32.17	C
ATOM	244	C	SER	A	46	22.771	20.978	6.767	1.00	32.55	C
ATOM	245	O	SER	A	46	23.568	21.871	6.562	1.00	31.31	O
ATOM	246	CB	SER	A	46	21.255	20.447	4.936	1.00	32.06	C
ATOM	247	OG	SER	A	46	21.909	19.187	4.931	1.00	31.15	O
ATOM	248	N	GLN	A	47	23.068	19.849	7.358	1.00	33.60	N
ATOM	249	CA	GLN	A	47	24.370	19.546	7.878	1.00	34.42	C
ATOM	250	C	GLN	A	47	25.385	19.453	6.754	1.00	34.74	C
ATOM	251	O	GLN	A	47	26.554	19.685	6.971	1.00	35.40	O
ATOM	252	CB	GLN	A	47	24.232	18.194	8.593	1.00	35.09	C
ATOM	253	CG	GLN	A	47	25.465	17.417	8.733	1.00	36.19	C
ATOM	254	CD	GLN	A	47	25.670	16.422	7.678	1.00	36.93	C
ATOM	255	OE1	GLN	A	47	24.757	16.093	6.902	1.00	38.75	O
ATOM	256	NE2	GLN	A	47	26.894	15.903	7.630	1.00	40.53	N
ATOM	257	N	SER	A	48	24.933	19.095	5.556	1.00	34.63	N
ATOM	258	CA	SER	A	48	25.821	18.922	4.415	1.00	34.93	C
ATOM	259	C	SER	A	48	26.128	20.249	3.735	1.00	35.90	C
ATOM	260	O	SER	A	48	26.990	20.315	2.862	1.00	36.31	O
ATOM	261	CB	SER	A	48	25.182	17.991	3.381	1.00	34.59	C
ATOM	262	OG	SER	A	48	23.912	18.483	2.955	1.00	33.48	O
ATOM	263	N	ASP	A	49	25.415	21.302	4.124	1.00	36.41	N
ATOM	264	CA	ASP	A	49	25.583	22.606	3.512	1.00	37.09	C

ATOM	265	C	ASP	A	49	26.855	23.291	3.989	1.00	37.81	C
ATOM	266	O	ASP	A	49	27.020	23.523	5.182	1.00	36.99	O
ATOM	267	CB	ASP	A	49	24.383	23.451	3.877	1.00	37.42	C
ATOM	268	CG	ASP	A	49	24.323	24.733	3.117	1.00	38.29	C
ATOM	269	OD1	ASP	A	49	25.383	25.351	2.849	1.00	37.80	O
ATOM	270	OD2	ASP	A	49	23.223	25.191	2.760	1.00	40.61	O
ATOM	271	N	PRO	A	50	27.740	23.649	3.056	1.00	38.39	N
ATOM	272	CA	PRO	A	50	29.005	24.291	3.409	1.00	38.24	C
ATOM	273	C	PRO	A	50	28.802	25.502	4.285	1.00	38.16	C
ATOM	274	O	PRO	A	50	29.671	25.797	5.088	1.00	37.37	O
ATOM	275	CB	PRO	A	50	29.577	24.738	2.051	1.00	38.14	C
ATOM	276	CG	PRO	A	50	28.978	23.915	1.070	1.00	38.31	C
ATOM	277	CD	PRO	A	50	27.620	23.473	1.601	1.00	38.85	C
ATOM	278	N	ARG	A	51	27.686	26.199	4.125	1.00	38.66	N
ATOM	279	CA	ARG	A	51	27.448	27.403	4.912	1.00	39.05	C
ATOM	280	C	ARG	A	51	27.332	27.077	6.391	1.00	38.94	C
ATOM	281	O	ARG	A	51	27.668	27.908	7.259	1.00	38.35	O
ATOM	282	CB	ARG	A	51	26.199	28.120	4.438	1.00	39.34	C
ATOM	283	CG	ARG	A	51	26.372	28.781	3.067	1.00	41.10	C
ATOM	284	CD	ARG	A	51	25.099	29.355	2.486	1.00	42.20	C
ATOM	285	NE	ARG	A	51	24.111	28.314	2.192	1.00	44.96	N
ATOM	286	CZ	ARG	A	51	22.815	28.551	2.043	1.00	46.68	C
ATOM	287	NH1	ARG	A	51	22.348	29.795	2.162	1.00	47.61	N
ATOM	288	NH2	ARG	A	51	21.980	27.563	1.774	1.00	46.08	N
ATOM	289	N	ALA	A	52	26.882	25.867	6.688	1.00	38.31	N
ATOM	290	CA	ALA	A	52	26.729	25.498	8.082	1.00	38.63	C
ATOM	291	C	ALA	A	52	28.093	25.311	8.677	1.00	38.81	C
ATOM	292	O	ALA	A	52	28.341	25.682	9.816	1.00	39.03	O
ATOM	293	CB	ALA	A	52	25.907	24.233	8.235	1.00	38.36	C
ATOM	294	N	GLU	A	53	28.988	24.733	7.899	1.00	39.48	N
ATOM	295	CA	GLU	A	53	30.316	24.484	8.388	1.00	40.51	C
ATOM	296	C	GLU	A	53	31.038	25.802	8.621	1.00	40.41	C
ATOM	297	O	GLU	A	53	31.740	25.954	9.618	1.00	39.82	O
ATOM	298	CB	GLU	A	53	31.093	23.614	7.436	1.00	40.70	C
ATOM	299	CG	GLU	A	53	32.129	22.790	8.171	1.00	44.79	C
ATOM	300	CD	GLU	A	53	31.596	21.435	8.633	1.00	48.98	C
ATOM	301	OE1	GLU	A	53	30.427	21.329	9.017	1.00	51.56	O
ATOM	302	OE2	GLU	A	53	32.354	20.454	8.620	1.00	54.44	O
ATOM	303	N	GLU	A	54	30.851	26.752	7.713	1.00	40.45	N
ATOM	304	CA	GLU	A	54	31.465	28.060	7.853	1.00	41.40	C
ATOM	305	C	GLU	A	54	30.991	28.731	9.162	1.00	40.32	C
ATOM	306	O	GLU	A	54	31.760	29.374	9.836	1.00	39.89	O
ATOM	307	CB	GLU	A	54	31.119	28.974	6.679	1.00	42.12	C
ATOM	308	CG	GLU	A	54	31.697	28.557	5.333	1.00	47.25	C
ATOM	309	CD	GLU	A	54	30.953	29.191	4.129	1.00	53.54	C
ATOM	310	OE1	GLU	A	54	30.459	30.366	4.276	1.00	57.47	O
ATOM	311	OE2	GLU	A	54	30.882	28.527	3.036	1.00	53.82	O
ATOM	312	N	LEU	A	55	29.735	28.534	9.533	1.00	39.03	N
ATOM	313	CA	LEU	A	55	29.223	29.198	10.687	1.00	37.80	C
ATOM	314	C	LEU	A	55	29.840	28.673	11.956	1.00	36.83	C
ATOM	315	O	LEU	A	55	30.293	29.464	12.795	1.00	35.66	O
ATOM	316	CB	LEU	A	55	27.715	29.081	10.725	1.00	38.06	C
ATOM	317	CG	LEU	A	55	27.072	29.921	9.621	1.00	37.63	C
ATOM	318	CD1	LEU	A	55	25.620	29.569	9.449	1.00	39.63	C
ATOM	319	CD2	LEU	A	55	27.174	31.356	9.928	1.00	36.27	C
ATOM	320	N	ILE	A	56	29.876	27.346	12.079	1.00	35.87	N
ATOM	321	CA	ILE	A	56	30.436	26.684	13.257	1.00	35.35	C
ATOM	322	C	ILE	A	56	31.916	27.001	13.410	1.00	35.82	C
ATOM	323	O	ILE	A	56	32.377	27.299	14.499	1.00	36.59	O
ATOM	324	CB	ILE	A	56	30.281	25.198	13.139	1.00	34.84	C
ATOM	325	CG1	ILE	A	56	28.790	24.810	13.132	1.00	34.00	C

ATOM	326	CG2	ILE	A	56	31.022	24.535	14.280	1.00	34.89	C
ATOM	327	CD1	ILE	A	56	28.502	23.361	12.684	1.00	30.65	C
ATOM	328	N	GLU	A	57	32.636	26.964	12.301	1.00	36.28	N
ATOM	329	CA	GLU	A	57	34.056	27.244	12.255	1.00	37.26	C
ATOM	330	C	GLU	A	57	34.295	28.634	12.809	1.00	37.41	C
ATOM	331	O	GLU	A·	57	35.278	28.879	13.516	1.00	38.73	O
ATOM	332	CB	GLU	A	57	34.562	27.167	10.795	1.00	37.54	C
ATOM	333	CG	GLU	A	57	36.035	27.462	10.572	1.00	39.41	C
ATOM	334	CD	GLU	A	57	36.948	26.668	11.493	1.00	44.86	C
ATOM	335	OE1	GLU	A	57	36.666	25.458	11.741	1.00	48.72	O.
ATOM	336	OE2	GLU	A	57	37.961	27.260	11.965	1.00	46.32	O
ATOM	337	N	ASN	A	58	33.386	29.537	12.485	1.00	36.64	N
ATOM	338	CA	ASN	A	58	33.456	30.907	12.926	1.00	36.26	C
ATOM	339	C	ASN	A	58	32.768	31.226	14.219	1.00	35.28	C
ATOM	340	O	ASN	A	58	32.569	32.376	14.531	1.00	33.45	O
ATOM	341	CB	ASN	A	58	32.798	31.758	11.898	1.00	36.88	C
ATOM	342	CG	ASN	A	58	33.763	32.461	11.107	1.00	39.77	C
ATOM	343	OD1	ASN	A	58	34.140	31.983	10.018	1.00	41.34	O
ATOM	344	ND2	ASN	A	58	34.241	33.617	11.639	1.00	41.14	N
ATOM	345	N	GLU	A	59	32.366	30.205	14.945	1.00	35.05	N
ATOM	346	CA	GLU	A	59	31.706	30.415	16.226	1.00	35.00	C
ATOM	347	C	GLU	A	59	30.481	31.314	16.133	1.00	33.86	C
ATOM	348	O	GLU	A	59	30.293	32.238	16.904	1.00	33.16	O
ATOM	349	CB	GLU	A	59	32.729	30.855	17.244	1.00	34.95	C
ATOM	350	CG	GLU	A	59	33.708	29.700	17.423	1.00	37.79	C
ATOM	351	CD	GLU	A	59	34.652	29.820	18.586	1.00	39.57	C
ATOM	352	OE1	GLU	A	59	35.809	30.145	18.349	1.00	43.67	O
ATOM	353	OE2	GLU	A	59	34.254	29.545	19.723	1.00	45.29	O
ATOM	354	N	GLU	A	60	29.644	30.995	15.157	1.00	32.92	N
ATOM	355	CA	GLU	A	60	28.359	31.641	14.983	1.00	32.66	C
ATOM	356	C	GLU	A	60	27.284	30.576	14.993	1.00	30.59	C
ATOM	357	O	GLU	A	60	27.456	29.485	14.461	1.00	30.47	O
ATOM	358	CB	GLU	A	60	28.312	32.400	13.685	1.00	33.20	C
ATOM	359	CG	GLU	A	60	29.384	33.454	13.615	1.00	38.62	C
ATOM	360	CD	GLU	A	60	28.955	34.617	12.762	1.00	45.73	C
ATOM	361	OE1	GLU	A	60	29.075	34.553	11.519	1.00	48.47	O
ATOM	362	OE2	GLU	A	60	28.466	35.587	13.367	1.00	53.89	O
ATOM	363	N	PRO	A	61	26.152	30.915	15.560	1.00	28.63	N
ATOM	364	CA	PRO	A	61	25.073	29.954	15.735	1.00	28.05	C
ATOM	365	C	PRO	A	61	24.462	29.451·	14.443	1.00	27.61	C
ATOM	366	O	PRO	A	61	24.475	30.120	13.426	1.00	27.23	O·
ATOM	367	CB	PRO	A	61	24.021	30.754	16.492	1.00	28.67	C
ATOM	368	CG	PRO	A	61	24.385	32.140	16.400	1.00	27.46	C
ATOM	369	CD	PRO	A	61	25.811	32.253	16.038	1.00	27.71	C
ATOM	370	N	VAL	A	62	23.936	28.237	14.475	1.00	27.43	N
ATOM	371	CA	VAL	A	62	23.254	27.685	13.317	1.00	27.09	C
ATOM	372	C	VAL	A	62	22.372	26.569	13.802	1.00	27.40	·C·
ATOM	373	O	VAL	A	62	22.707	25.893	14.780	1.00	27.79	O
ATOM	374	CB	VAL	A	62·	24.219	27.181	12.270	1.00	27.04	C
ATOM	375	CG1	VAL	A	62	25.106	26.166	12.829	1.00	27.34	C
ATOM	376	CG2	VAL	A	62	23.473	26.659	11.037	1.00	27.58	C
ATOM	377	N	VAL	A	63	21.195	26.440	13.199	1.00	27.19	N
ATOM	378	CA	VAL	A	63	20.339	25.338	13.526	1.00	27.37	C
ATOM	379	C	VAL	A	63	20.540	24.324	12.383	1.00	27.33	C
ATOM	380	O	VAL	A	63	20.360	24.672	11.208	1.00	27.05	O
ATOM	381	CB	VAL	A	63	18.857	25.737	13.611	1.00	27.47	C
ATOM	382	CG1	VAL	A	63	17.976	24.446	13.695	1.00	28.55	C
ATOM	383	CG2	VAL	A	63	18.616	26.603	14.793	1.00	25.77	C
ATOM	384	N	LEU	A	64	20.933	23.114	12.743	1.00	27.26	N
ATOM	385	CA	LEU	A	64	21.119	22.001	11.820	1.00	28.51	C
ATOM	386	C	LEU	A	64	19.897	21.128	11.894	1.00	28.40	C

ATOM	387	O	LEU A	64	19.517	20.692	12.982	1.00	28.69	O
ATOM	388	CB	LEU A	64	22.352	21.187	12.204	1.00	28.92	C
ATOM	389	CG	LEU A	64	23.624	22.016	12.142	1.00	31.65	C
ATOM	390	CD1	LEU A	64	24.800	21.273	12.534	1.00	34.84	C
ATOM	391	CD2	LEU A	64	23.843	22.490	10.722	1.00	35.77	C
ATOM	392	N	THR A	65	19.284	20.868	10.752	1.00	28.44	N
ATOM	393	CA	THR A	65	18.003	20.164	10.721	1.00	29.54	C
ATOM	394	C	THR A	65	18.054	18.659	10.534	1.00	29.40	C
ATOM	395	O	THR A	65	17.046	17.985	10.799	1.00	29.20	O
ATOM	396	CB	THR A	65	17.139	20.679	9.552	1.00	30.07	C
ATOM	397	OG1	THR A	65	17.879	20.569	8.318	1.00	30.75	O
ATOM	398	CG2	THR A	65	16.878	22.137	9.665	1.00	31.86	C
ATOM	399	N	ASP A	66	19.183	18.150	10.059	1.00	29.30	N
ATOM	400	CA	ASP A	66	19.323	16.722	9.719	1.00	29.78	C
ATOM	401	C	ASP A	66	20.573	15.970	10.196	1.00	29.12	C
ATOM	402	O	ASP A	66	21.081	15.141	9.432	1.00	29.09	O
ATOM	403	CB	ASP A	66	19.301	16.582	8.195	1.00	29.41	C
ATOM	404	CG	ASP A	66	20.274	17.507	7.525	1.00	32.36	C
ATOM	405	OD1	ASP A	66	20.924	18.319	8.230	1.00	34.87	O
ATOM	406	OD2	ASP A	66	20.447	17.534	6.287	1.00	35.70	O
ATOM	407	N	THR A	67	21.078	16.254	11.404	1.00	28.05	N
ATOM	408	CA	THR A	67	22.266	15.565	11.897	1.00	27.24	C
ATOM	409	C	THR A	67	21.943	14.171	12.355	1.00	26.92	C
ATOM	410	O	THR A	67	22.807	13.297	12.367	1.00	25.98	O
ATOM	411	CB	THR A	67	22.856	16.258	13.134	1.00	27.78	C
ATOM	412	OG1	THR A	67	21.874	16.338	14.186	1.00	25.71	O
ATOM	413	CG2	THR A	67	23.268	17.664	12.820	1.00	29.22	C
ATOM	414	N	ASN A	68	20.704	13.979	12.777	1.00	26.53	N
ATOM	415	CA	ASN A	68	20.307	12.711	13.355	1.00	27.10	C
ATOM	416	C	ASN A	68	21.075	12.499	14.647	1.00	26.46	C
ATOM	417	O	ASN A	68	21.223	11.399	15.092	1.00	26.90	O
ATOM	418	CB	ASN A	68	20.583	11.547	12.401	1.00	27.41	C
ATOM	419	CG	ASN A	68	19.546	11.415	11.308	1.00	28.18	C
ATOM	420	OD1	ASN A	68	18.345	11.286	11.566	1.00	29.22	O
ATOM	421	ND2	ASN A	68	20.006	11.445	10.077	1.00	29.40	N
ATOM	422	N	LEU A	69	21.585	13.569	15.227	1.00	26.58	N
ATOM	423	CA	LEU A	69	22.429	13.481	16.427	1.00	26.67	C
ATOM	424	C	LEU A	69	21.832	12.639	17.558	1.00	26.73	C
ATOM	425	O	LEU A	69	22.550	11.822	18.166	1.00	27.74	O
ATOM	426	CB	LEU A	69	22.739	14.870	16.968	1.00	26.04	C
ATOM	427	CG	LEU A	69	23.677	14.904	18.157	1.00	26.23	C
ATOM	428	CD1	LEU A	69	24.986	14.168	17.894	1.00	27.92	C
ATOM	429	CD2	LEU A	69	23.976	16.343	18.556	1.00	24.74	C
ATOM	430	N	VAL A	70	20.557	12.857	17.861	1.00	26.02	N
ATOM	431	CA	VAL A	70	19.882	12.091	18.898	1.00	26.50	C
ATOM	432	C	VAL A	70	18.673	11.364	18.345	1.00	26.71	C
ATOM	433	O	VAL A	70	17.650	11.183	19.015	1.00	25.59	O
ATOM	434	CB	VAL A	70	19.479	12.943	20.098	1.00	26.46	C
ATOM	435	CG1	VAL A	70	20.717	13.505	20.764	1.00	28.17	C
ATOM	436	CG2	VAL A	70	18.517	14.016	19.716	1.00	23.88	C
ATOM	437	N	TYR A	71	18.832	10.920	17.113	1.00	27.86	N
ATOM	438	CA	TYR A	71	17.791	10.159	16.451	1.00	29.60	C
ATOM	439	C	TYR A	71	17.093	9.167	17.388	1.00	29.76	C
ATOM	440	O	TYR A	71	15.905	9.202	17.478	1.00	30.54	O
ATOM	441	CB	TYR A	71	18.326	9.459	15.208	1.00	29.31	C
ATOM	442	CG	TYR A	71	17.347	8.479	14.686	1.00	31.42	C
ATOM	443	CD1	TYR A	71	16.136	8.884	14.120	1.00	31.39	C
ATOM	444	CD2	TYR A	71	17.610	7.107	14.779	1.00	32.30	C
ATOM	445	CE1	TYR A	71	15.223	7.905	13.641	1.00	31.86	C
ATOM	446	CE2	TYR A	71	16.736	6.181	14.317	1.00	29.75	C
ATOM	447	CZ	TYR A	71	15.556	6.558	13.755	1.00	31.10	C

ATOM	448	OH	TYR A	71	14.698	5.530	13.342	1.00	39.44	O
ATOM	449	N	PRO A	72	17.807	8.317	18.108	1.00	30.56	N
ATOM	450	CA	PRO A	72	17.150	7.336	18.991	1.00	30.85	C
ATOM	451	C	PRO A	72	16.389	7.914	20.158	1.00	30.85	C
ATOM	452	O	PRO A	72	15.549	7.233	20.750	1.00	30.12	O
ATOM	453	CB	PRO A	72	18.310	6.468	19.507	1.00	30.71	C
ATOM	454	CG	PRO A	72	19.420	6.692	18.515	1.00	31.79	C
ATOM	455	CD	PRO A	72	19.268	8.158	18.096	1.00	30.88	C
ATOM	456	N	ALA A	73	16.650	9.166	20.508	1.00	31.72	N
ATOM	457	CA	ALA A	73	15.918	9.743	21.627	1.00	31.71	C
ATOM	458	C	ALA A	73	14.596	10.371	21.172	1.00	31.83	C
ATOM	459	O	ALA A	73	13.786	10.808	22.000	1.00	31.52	O
ATOM	460	CB	ALA A	73	16.762	10.742	22.340	1.00	32.17	C
ATOM	461	N	LEU A	74	14.345	10.408	19.868	1.00	31.19	N
ATOM	462	CA	LEU A	74	13.108	11.028	19.439	1.00	32.01	C
ATOM	463	C	LEU A	74	11.856	10.343	19.965	1.00	32.30	C
ATOM	464	O	LEU A	74	10.807	10.914	19.963	1.00	31.90	O
ATOM	465	CB	LEU A	74	13.050	11.191	17.931	1.00	31.25	C
ATOM	466	CG	LEU A	74	14.140	12.103	17.400	1.00	34.53	C
ATOM	467	CD1	LEU A	74	13.904	12.418	15.965	1.00	37.35	C
ATOM	468	CD2	LEU A	74	14.264	13.436	18.200	1.00	34.44	C
ATOM	469	N	LYS A	75	11.963	9.100	20.396	1.00	34.18	N
ATOM	470	CA	LYS A	75	10.802	8.376	20.910	1.00	34.36	C
ATOM	471	C	LYS A	75	10.618	8.616	22.403	1.00	35.18	C
ATOM	472	O	LYS A	75	9.575	8.304	22.945	1.00	35.70	O
ATOM	473	CB	LYS A	75	10.950	6.876	20.631	1.00	34.51	C
ATOM	474	CG	LYS A	75	12.138	6.219	21.294	1.00	33.19	C
ATOM	475	CD	LYS A	75	12.302	4.754	20.834	1.00	31.54	C
ATOM	476	CE	LYS A	75	13.796	4.304	20.744	1.00	29.70	C
ATOM	477	NZ	LYS A	75	14.460	4.158	22.026	1.00	28.79	N
ATOM	478	N	TRP A	76	11.619	9.181	23.071	1.00	35.44	N
ATOM	479	CA	TRP A	76	11.517	9.426	24.495	1.00	36.05	C
ATOM	480	C	TRP A	76	10.307	10.264	24.893	1.00	37.47	C
ATOM	481	O	TRP A	76	9.958	11.222	24.212	1.00	38.43	O
ATOM	482	CB	TRP A	76	12.742	10.179	24.994	1.00	35.67	C
ATOM	483	CG	TRP A	76	13.980	9.395	24.963	1.00	33.87	C
ATOM	484	CD1	TRP A	76	14.136	8.116	24.520	1.00	32.29	C
ATOM	485	CD2	TRP A	76	15.252	9.821	25.409	1.00	30.36	C
ATOM	486	NE1	TRP A	76	15.440	7.723	24.673	1.00	30.42	N
ATOM	487	CE2	TRP A	76	16.143	8.754	25.221	1.00	28.82	C
ATOM	488	CE3	TRP A	76	15.739	11.013	25.954	1.00	29.45	C
ATOM	489	CZ2	TRP A	76	17.471	8.833	25.560	1.00	30.56	C
ATOM	490	CZ3	TRP A	76	17.056	11.091	26.291	1.00	29.56	C
ATOM	491	CH2	TRP A	76	17.917	10.017	26.092	1.00	30.20	C
ATOM	492	N	ASP A	77	9.698	9.894	26.014	1.00	38.14	N
ATOM	493	CA	ASP A	77	8.620	10.640	26.635	1.00	38.33	C
ATOM	494	C	ASP A	77	8.653	10.223	28.094	1.00	37.89	C
ATOM	495	O	ASP A	77	9.443	9.390	28.447	1.00	37.97	O
ATOM	496	CB	ASP A	77	7.283	10.353	25.974	1.00	38.71	C
ATOM	497	CG	ASP A	77	6.882	8.904	26.049	1.00	39.50	C
ATOM	498	OD1	ASP A	77	7.414	8.107	26.867	1.00	41.50	O
ATOM	499	OD2	ASP A	77	6.006	8.472	25.299	1.00	41.98	O
ATOM	500	N	LEU A	78	7.838	10.800	28.955	1.00	38.47	N
ATOM	501	CA	LEU A	78	7.941	10.481	30.375	1.00	39.09	C
ATOM	502	C	LEU A	78	7.734	9.002	30.662	1.00	39.89	C
ATOM	503	O	LEU A	78	8.421	8.423	31.507	1.00	40.19	O
ATOM	504	CB	LEU A	78	6.966	11.310	31.171	1.00	39.02	C
ATOM	505	CG	LEU A	78	7.169	12.815	31.042	1.00	41.51	C
ATOM	506	CD1	LEU A	78	6.058	13.567	31.764	1.00	42.72	C
ATOM	507	CD2	LEU A	78	8.522	13.216	31.618	1.00	42.31	C
ATOM	508	N	GLU A	79	6.795	8.369	29.971	1.00	40.66	N

ATOM	509	CA	GLU A	79	6.557	6.948	30.212	1.00	41.43	C
ATOM	510	C	GLU A	79	7.794	6.086	29.909	1.00	40.84	C
ATOM	511	O	GLU A	79	8.228	5.283	30.742	1.00	40.45	O
ATOM	512	CB	GLU A	79	5.343	6.458	29.418	1.00	42.10	C
ATOM	513	CG	GLU A	79	5.023	4.998	29.658	1.00	45.06	C
ATOM	514	CD	GLU A	79	3.840	4.525	28.846	1.00	49.74	C
ATOM	515	OE1	GLU A	79	3.436	5.254	27.914	1.00	52.37	O
ATOM	516	OE2	GLU A	79	3.316	3.426	29.150	1.00	53.21	O
ATOM	517	N	TYR A	80	8.361	6.248	28.718	1.00	40.43	N
ATOM	518	CA	TYR A	80	9.559	5.495	28.362	1.00	40.14	C
ATOM	519	C	TYR A	80	10.750	5.765	29.297	1.00	40.06	C
ATOM	520	O	TYR A	80	11.485	4.844	29.664	1.00	39.72	O
ATOM	521	CB	TYR A	80	9.946	5.832	26.946	1.00	39.96	C
ATOM	522	CG	TYR A	80	11.193	5.147	26.420	1.00	39.51	C
ATOM	523	CD1	TYR A	80	11.118	3.897	25.804	1.00	38.93	C
ATOM	524	CD2	TYR A	80	12.433	5.768	26.490	1.00	36.89	C
ATOM	525	CE1	TYR A	80	12.253	3.277	25.290	1.00	38.08	C
ATOM	526	CE2	TYR A	80	13.562	5.154	25.993	1.00	38.15	C
ATOM	527	CZ	TYR A	80	13.468	3.915	25.379	1.00	39.06	C
ATOM	528	OH	TYR A	80	14.604	3.319	24.863	1.00	38.99	O
ATOM	529	N	LEU A	81	10.935	7.017	29.688	1.00	39.68	N
ATOM	530	CA	LEU A	81	12.061	7.362	30.565	1.00	40.01	C
ATOM	531	C	LEU A	81	11.858	6.806	31.978	1.00	39.86	C
ATOM	532	O	LEU A	81	12.792	6.284	32.608	1.00	39.47	O
ATOM	533	CB	LEU A	81	12.314	8.889	30.604	1.00	39.50	C
ATOM	534	CG	LEU A	81	12.765	9.532	29.287	1.00	39.76	C
ATOM	535	CD1	LEU A	81	12.805	11.045	29.402	1.00	39.84	C
ATOM	536	CD2	LEU A	81	14.117	9.018	28.840	1.00	39.32	C
ATOM	537	N	GLN A	82	10.645	6.932	32.482	1.00	40.38	N
ATOM	538	CA	GLN A	82	10.346	6.415	33.804	1.00	41.02	C
ATOM	539	C	GLN A	82	10.612	4.920	33.799	1.00	40.84	C
ATOM	540	O	GLN A	82	11.193	4.379	34.711	1.00	40.35	O
ATOM	541	CB	GLN A	82	8.900	6.688	34.164	1.00	41.40	C
ATOM	542	CG	GLN A	82	8.447	5.906	35.351	1.00	42.97	C
ATOM	543	CD	GLN A	82	7.291	6.560	36.099	1.00	45.14	C
ATOM	544	OE1	GLN A	82	6.662	7.502	35.616	1.00	44.10	O
ATOM	545	NE2	GLN A	82	7.003	6.039	37.287	1.00	48.04	N
ATOM	546	N	GLU A	83	10.222	4.256	32.728	1.00	41.35	N
ATOM	547	CA	GLU A	83	10.442	2.816	32.620	1.00	41.46	C
ATOM	548	C	GLU A	83	11.926	2.444	32.465	1.00	40.81	C
ATOM	549	O	GLU A	83	12.350	1.407	32.958	1.00	41.13	O
ATOM	550	CB	GLU A	83	9.610	2.243	31.472	1.00	41.27	C
ATOM	551	CG	GLU A	83	9.609	0.728	31.366	1.00	44.77	C
ATOM	552	CD	GLU A	83	8.878	0.018	32.514	1.00	49.16	C
ATOM	553	OE1	GLU A	83	8.219	0.672	33.347	1.00	52.26	O
ATOM	554	OE2	GLU A	83	8.978	-1.220	32.606	1.00	53.23	O
ATOM	555	N	ASN A	84	12.743	3.298	31.854	1.00	39.81	N
ATOM	556	CA	ASN A	84	14.099	2.859	31.515	1.00	38.82	C
ATOM	557	C	ASN A	84	15.290	3.611	32.048	1.00	38.20	C
ATOM	558	O	ASN A	84	16.402	3.117	31.919	1.00	36.98	O
ATOM	559	CB	ASN A	84	14.244	2.828	29.995	1.00	38.83	C
ATOM	560	CG	ASN A	84	13.301	1.865	29.349	1.00	38.45	C
ATOM	561	OD1	ASN A	84	13.307	0.670	29.664	1.00	40.40	O
ATOM	562	ND2	ASN A	84	12.480	2.365	28.441	1.00	35.77	N
ATOM	563	N	ILE A	85	15.088	4.781	32.645	1.00	38.08	N
ATOM	564	CA	ILE A	85	16.226	5.598	32.998	1.00	38.57	C
ATOM	565	C	ILE A	85	16.929	5.280	34.307	1.00	38.70	C
ATOM	566	O	ILE A	85	17.849	5.993	34.702	1.00	39.78	O
ATOM	567	CB	ILE A	85	15.827	7.056	32.932	1.00	39.02	C
ATOM	568	CG1	ILE A	85	17.001	7.891	32.418	1.00	39.43	C
ATOM	569	CG2	ILE A	85	15.291	7.544	34.266	1.00	39.22	C

ATOM	570	CD1	ILE	A	85	16.618	9.347	32.148	1.00	40.41	C
ATOM	571	N	GLY	A	86	16.513	4.227	34.993	1.00	38.59	N
ATOM	572	CA	GLY	A	86	17.208	3.801	36.199	1.00	38.15	C
ATOM	573	C	GLY	A	86	16.658	4.386	37.476	1.00	37.92	C
ATOM	574	O	GLY	A	86	15.652	5.097	37.461	1.00	37.90	O
ATOM	575	N	ASN	A	87	17.359	4.113	38.574	1.00	37.70	N
ATOM	576	CA	ASN	A	87	16.941	4.542	39.899	1.00	37.34	C
ATOM	577	C	ASN	A	87	17.898	5.576	40.487	1.00	36.99	C
ATOM	578	O	ASN	A	87	17.920	5.807	41.710	1.00	36.36	O
ATOM	579	CB	ASN	A	87	16.786	3.306	40.840	1.00	37.40	C
ATOM	580	N	GLY	A	88	18.676	6.224	39.618	1.00	37.00	N
ATOM	581	CA	GLY	A	88	19.593	7.272	40.056	1.00	36.90	C
ATOM	582	C	GLY	A	88	18.855	8.506	40.541	1.00	36.61	C
ATOM	583	O	GLY	A	88	17.673	8.648	40.298	1.00	36.55	O
ATOM	584	N	ASP	A	89	19.532	9.392	41.250	1.00	37.05	N
ATOM	585	CA	ASP	A	89	18.882	10.640	41.687	1.00	37.92	C
ATOM	586	C	ASP	A	89	18.812	11.654	40.548	1.00	37.52	C
ATOM	587	O	ASP	A	89	19.724	11.713	39.730	1.00	37.73	O
ATOM	588	CB	ASP	A	89	19.639	11.281	42.840	1.00	38.02	C
ATOM	589	CG	ASP	A	89	19.342	10.639	44.165	1.00	40.19	C
ATOM	590	OD1	ASP	A	89	18.398	9.813	44.252	1.00	44.15	O
ATOM	591	OD2	ASP	A.	89	20.002	10.918	45.186	1.00	42.25	O
ATOM	592	N	PHE	A	90	17.734	12.438	40.491	1.00	37.19	N
ATOM	593	CA	PHE	A	90	17.638	13.546	39.520	1.00	36.65	C
ATOM	594	C	PHE	A	90	17.435	14.912	40.182	1.00	36.57	C
ATOM	595	O	PHE	A	90	16.551	15.078	41.015	1.00	36.80	O
ATOM	596	CB	PHE	A	90	16.512	13.310	38.516	1.00	35.79	C
ATOM	597	CG	PHE	A	90	16.793	12.200	37.551	1.00	35.34	C
ATOM	598	CD1	PHE	A	90	16.627	10.870	37.931	1.00	34.10	C
ATOM	599	CD2	PHE	A	90	17.235	12.472	36.275	1.00	34.19	C
ATOM	600	CE1	PHE	A	90	16.875	9.854	37.061	1.00	31.47	C
ATOM	601	CE2	PHE	A	90	17.488	11.452	35.404	1.00	35.32	C
ATOM	602	CZ	PHE	A	90	17.315	10.123	35.813	1.00	34.26	C
ATOM	603	N	SER	A	91	18.257	15.886	39.803	1.00	36.85	N
ATOM	604	CA	SER	A	91	18.077	17.264	40.278	1.00	37.16	C
ATOM	605	C	SER	A	91	16.856	17.884	39.612	1.00	37.28	C
ATOM	606	O	SER	A	91	16.761	17.912	38.392	1.00	36.72	O
ATOM	607	CB	SER	A	91	19.278	18.146	39.971	1.00	36.75	C
ATOM	608	OG	SER	A	91	20.470	17.600	40.456	1.00	35.79	O
ATOM	609	N	VAL	A	92	15.938	18.374	40.434	1.00	37.83	N
ATOM	610	CA	VAL	A	92	14.740	19.022	39.963	1.00	38.40	C
ATOM	611	C	VAL	A	92	14.549	20.334	40.690	1.00	39.41	C
ATOM	612	O	VAL	A	92	14.465	20.394	41.941	1.00	39.08	O
ATOM	613	CB	VAL	A	92	13.507	18.227	40.298	1.00	38.96	C
ATOM	614	CG1	VAL	A	92	12.270	19.005	39.893	1.00	38.57	C
ATOM	615	CG2	VAL	A	92	13.556	16.837	39.651	1.00	39.45	C
ATOM	616	N	TYR	A	93	14.426	21.386	39.895	1.00	39.95	N
ATOM	617	CA	TYR	A	93	14.214	22.701	40.419	1.00	40.34	C
ATOM	618	C	TYR	A	93	12.756	22.950	40.459	1.00	40.76	C
ATOM	619	O	TYR	A	93	11.999	22.493	39.583	1.00	40.39	O
ATOM	620	CB	TYR	A	93	14.897	23.729	39.529	1.00	40.89	C
ATOM	621	CG	TYR	A	93	16.369	23.580	39.627	1.00	40.80	C
ATOM	622	CD1	TYR	A	93	17.067	24.135	40.681	1.00	40.79	C
ATOM	623	CD2	TYR	A	93	17.042	22.801	38.743	1.00	41.05	C
ATOM	624	CE1	TYR	A	93	18.395	23.953	40.802	1.00	41.05	C
ATOM	625	CE2	TYR	A	93	18.363	22.629	38.852	1.00	42.75	C
ATOM	626	CZ	TYR	A	93	19.037	23.204	39.881	1.00	42.45	C
ATOM	627	OH	TYR	A	93	20.372	22.965	39.971	1.00	47.63	O
ATOM	628	N	SER	A	94	12.385	23.699	41.482	1.00	41.70	N
ATOM	629	CA	SER	A	94	11.014	24.053	41.743	1.00	42.70	C
ATOM	630	C	SER	A	94	10.965	25.565	41.855	1.00	43.09	C

ATOM	631	O	SER	A	94	11.851	26.181	42.441	1.00	43.63	O
ATOM	632	CB	SER	A	94	10.570	23.415	43.051	1.00	42.76	C
ATOM	633	OG	SER	A	94	9.258	23.841	43.395	1.00	45.05	O
ATOM	634	N	ALA	A	95	9.929	26.171	41.308	1.00	43.42	N
ATOM	635	CA	ALA	A	95	9.839	27.607	41.323	1.00	43.49	C
ATOM	636	C	ALA	A	95	8.416	28.083	41.281	1.00	43.87	C
ATOM	637	O	ALA	A	95	7.520	27.416	40.789	1.00	43.95	O
ATOM	638	CB	ALA	A	95	10.572	28.164	40.145	1.00	43.70	C
ATOM	639	N	SER	A	96	8.219	29.287	41.770	1.00	44.66	N
ATOM	640	CA	SER	A	96	6.901	29.866	41.757	1.00	45.08	C
ATOM	641	C	SER	A	96	6.767	30.914	40.668	1.00	44.27	C
ATOM	642	O	SER	A	96	5.783	31.636	40.637	1.00	45.20	O
ATOM	643	CB	SER	A	96	6.604	30.510	43.095	1.00	45.33	C
ATOM	644	OG	SER	A	96	5.384	31.199	42.973	1.00	47.96	O
ATOM	645	N	THR	A	97	7.776	31.034	39.819	1.00	42.95	N
ATOM	646	CA	THR	A	97	7.738	31.962	38.688	1.00	42.08	C
ATOM	647	C	THR	A	97	8.103	31.184	37.461	1.00	40.94	C
ATOM	648	O	THR	A	97	8.604	30.095	37.584	1.00	40.73	O
ATOM	649	CB	THR	A	97	8.779	33.088	38.826	1.00	42.48	C
ATOM	650	OG1	THR	A	97	8.964	33.707	37.546	1.00	43.60	O
ATOM	651	CG2	THR	A	97	10.209	32.544	39.156	1.00	42.12	C
ATOM	652	N	HIS	A	98	7.904	31.734	36.275	1.00	40.18	N
ATOM	653	CA	HIS	A	98	8.319	31.012	35.074	1.00	40.09	C
ATOM	654	C	HIS	A	98	9.840	31.036	34.883	1.00	39.78	C
ATOM	655	O	HIS	A	98	10.376	30.277	34.078	1.00	38.48	O
ATOM	656	CB	HIS	A	98	7.660	31.580	33.824	1.00	40.00	C
ATOM	657	CG	HIS	A	98	7.947	33.028	33.582	1.00	40.56	C
ATOM	658	ND1	HIS	A	98	7.297	34.041	34.259	1.00	40.13	N
ATOM	659	CD2	HIS	A	98	8.805	33.640	32.729	1.00	42.26	C
ATOM	660	CE1	HIS	A	98	7.741	35.212	33.841	1.00	37.08	C
ATOM	661	NE2	HIS	A	98	8.661	35.002	32.915	1.00	39.74	N
ATOM	662	N	LYS	A	99	10.526	31.883	35.652	1.00	39.73	N
ATOM	663	CA	LYS	A	99	11.948	32.082	35.476	1.00	40.45	C
ATOM	664	C	LYS	A	99	12.861	31.221	36.332	1.00	40.34	C
ATOM	665	O	LYS	A	99	12.904	31.376	37.554	1.00	41.93	O
ATOM	666	CB	LYS	A	99	12.279	33.535	35.730	1.00	40.89	C
ATOM	667	CG	LYS	A	99	11.819	34.443	34.624	1.00	43.12	C
ATOM	668	CD	LYS	A	99	12.466	35.806	34.753	1.00	46.04	C
ATOM	669	CE	LYS	A	99	11.733	36.727	35.711	1.00	48.26	C
ATOM	670	NZ	LYS	A	99	10.662	37.495	35.003	1.00	49.55	N
ATOM	671	N	PHE	A	100	13.622	30.335	35.700	1.00	39.70	N
ATOM	672	CA	PHE	A	100	14.554	29.487	36.447	1.00	39.48	C
ATOM	673	C	PHE	A	100	16.001	30.011	36.390	1.00	39.52	C
ATOM	674	O	PHE	A	100	16.874	29.435	35.718	1.00	38.87	O
ATOM	675	CB	PHE	A	100	14.485	28.056	35.939	1.00	39.33	C
ATOM	676	CG	PHE	A	100	13.266	27.328	36.377	1.00	38.47	C
ATOM	677	CD1	PHE	A	100	12.059	27.519	35.725	1.00	36.20	C
ATOM	678	CD2	PHE	A	100	13.327	26.441	37.443	1.00	37.31	C
ATOM	679	CE1	PHE	A	100	10.960	26.846	36.125	1.00	36.52	C
ATOM	680	CE2	PHE	A	100	12.212	25.751	37.849	1.00	36.40	C
ATOM	681	CZ	PHE	A	100	11.037	25.946	37.206	1.00	36.52	C
ATOM	682	N	LEU	A	101	16.244	31.130	37.066	1.00	39.53	N
ATOM	683	CA	LEU	A	101	17.592	31.667	37.170	1.00	39.36	C
ATOM	684	C	LEU	A	101	18.548	30.642	37.787	1.00	39.88	C
ATOM	685	O	LEU	A	101	18.345	30.152	38.899	1.00	39.47	O
ATOM	686	CB	LEU	A	101	17.574	32.912	38.036	1.00	39.37	C
ATOM	687	CG	LEU	A	101	18.828	33.777	38.071	1.00	39.44	C
ATOM	688	CD1	LEU	A	101	19.258	34.290	36.693	1.00	37.56	C
ATOM	689	CD2	LEU	A	101	18.546	34.926	39.008	1.00	39.90	C
ATOM	690	N	TYR	A	102	19.578	30.297	37.032	1.00	41.10	N
ATOM	691	CA	TYR	A	102	20.623	29.415	37.507	1.00	41.59	C

TOM	692	C	TYR A 102	21.439	30.097	38.611	1.00	42.23	C
TOM	693	O	TYR A 102	21.778	31.296	38.500	1.00	42.28	O
TOM	694	CB	TYR A 102	21.580	29.048	36.370	1.00	41.49	C
TOM	695	CG	TYR A 102	22.706	28.209	36.894	1.00	43.02	C
TOM	696	CD1	TYR A 102	22.507	26.864	37.200	1.00	42.85	C
TOM	697	CD2	TYR A 102	23.941	28.761	37.150	1.00	43.85	C
TOM	698	CE1	TYR A 102	23.504	26.110	37.725	1.00	45.04	C
TOM	699	CE2	TYR A 102	24.942	28.005	37.696	1.00	46.05	C
TOM	700	CZ	TYR A 102	24.725	26.681	37.984	1.00	46.73	C
TOM	701	OH	TYR A 102	25.752	25.915	38.544	1.00	52.49	O
TOM	702	N	TYR A 103	21.759	29.340	39.657	1.00	42.12	N
TOM	703	CA	TYR A 103	22.665	29.832	40.690	1.00	42.58	C
TOM	704	C	TYR A 103	23.632	28.750	41.207	1.00	41.98	C
TOM	705	O	TYR A 103	23.333	27.560	41.237	1.00	42.05	O
TOM	706	CB	TYR A 103	21.901	30.435	41.843	1.00	43.03	C
TOM	707	CG	TYR A 103	20.964	29.493	42.477	1.00	44.79	C
TOM	708	CD1	TYR A 103	19.691	29.333	41.971	1.00	47.69	C
TOM	709	CD2	TYR A 103	21.338	28.769	43.590	1.00	49.51	C
TOM	710	CE1	TYR A 103	18.798	28.456	42.544	1.00	50.63	C
TOM	711	CE2	TYR A 103	20.449	27.890	44.202	1.00	52.43	C
TOM	712	CZ	TYR A 103	19.181	27.736	43.658	1.00	52.68	C
TOM	713	OH	TYR A 103	18.297	26.875	44.234	1.00	56.40	O
TOM	714	N	ASP A 104	24.809	29.190	41.603	1.00	41.00	N
TOM	715	CA	ASP A 104	25.844	28.288	42.026	1.00	40.33	C
TOM	716	C	ASP A 104	25.842	28.250	43.530	1.00	39.98	C
TOM	717	O	ASP A 104	26.177	29.224	44.219	1.00	38.58	O
TOM	718	CB	ASP A 104	27.169	28.768	41.492	1.00	40.13	C
TOM	719	CG	ASP A 104	28.310	27.929	41.958	1.00	42.26	C
TOM	720	OD1	ASP A 104	28.117	27.151	42.942	1.00	44.33	O
TOM	721	OD2	ASP A 104	29.429	27.989	41.393	1.00	42.30	O
TOM	722	N	GLU A 105	25.425	27.110	44.041	1.00	40.20	N
TOM	723	CA	GLU A 105	25.294	26.950	45.472	1.00	40.26	C
TOM	724	C	GLU A 105	26.605	27.213	46.228	1.00	39.92	C
TOM	725	O	GLU A 105	26.577	27.824	47.293	1.00	40.11	O
TOM	726	CB	GLU A 105	24.747	25.570	45.744	1.00	40.54	C
TOM	727	CG	GLU A 105	23.245	25.502	45.533	1.00	42.55	C
TOM	728	CD	GLU A 105	22.709	24.086	45.506	1.00	44.11	C
TOM	729	OE1	GLU A 105	23.178	23.251	46.323	1.00	46.78	O
TOM	730	OE2	GLU A 105	21.801	23.815	44.684	1.00	42.74	O
TOM	731	N	LYS A 106	27.748	26.819	45.661	1.00	39.52	N
TOM	732	CA	LYS A 106	29.041	26.991	46.336	1.00	39.53	C
TOM	733	C	LYS A 106	29.370	28.419	46.623	1.00	39.68	C
TOM	734	O	LYS A 106	30.199	28.697	47.471	1.00	40.24	O
TOM	735	CB	LYS A 106	30.221	26.479	45.504	1.00	39.89	C
TOM	736	CG	LYS A 106	30.257	24.976	45.143	1.00	40.25	C
TOM	737	N	LYS A 107	28.747	29.333	45.894	1.00	40.07	N
TOM	738	CA	LYS A 107	29.043	30.740	46.031	1.00	39.35	C
TOM	739	C	LYS A 107	28.061	31.421	46.937	1.00	39.82	C
TOM	740	O	LYS A 107	28.208	32.586	47.188	1.00	39.28	O
TOM	741	CB	LYS A 107	29.050	31.410	44.645	1.00	39.29	C
TOM	742	CG	LYS A 107	30.329	31.155	43.827	1.00	37.47	C
TOM	743	CD	LYS A 107	30.286	31.702	42.406	1.00	34.55	C
TOM	744	CE	LYS A 107	31.606	31.470	41.651	1.00	33.57	C
TOM	745	NZ	LYS A 107	31.607	31.880	40.178	1.00	30.95	N
TOM	746	N	MET A 108	27.071	30.707	47.458	1.00	41.78	N
TOM	747	CA	MET A 108	26.079	31.341	48.341	1.00	43.69	C
TOM	748	C	MET A 108	26.621	31.950	49.646	1.00	44.68	C
TOM	749	O	MET A 108	26.154	33.004	50.061	1.00	44.99	O
TOM	750	CB	MET A 108	24.923	30.396	48.594	1.00	44.05	C
TOM	751	CG	MET A 108	24.195	30.105	47.282	1.00	46.49	C
TOM	752	SD	MET A 108	22.723	29.125	47.315	1.00	51.54	S

ATOM	753	CE	MET A 108	21.653	30.080	48.484	1.00	51.43	C
ATOM	754	N	ALA A 109	27.630	31.341	50.254	1.00	46.34	N
ATOM	755	CA	ALA A 109	28.211	31.855	51.510	1.00	47.87	C
ATOM	756	C	ALA A 109	28.697	33.308	51.406	1.00	49.27	C
ATOM	757	O	ALA A 109	28.533	34.114	52.323	1.00	49.44	O
ATOM	758	CB	ALA A 109	29.355	30.958	51.960	1.00	47.63	C
ATOM	759	N	ASN A 110	29.276	33.651	50.269	1.00	50.88	N
ATOM	760	CA	ASN A 110	29.792	35.004	50.069	1.00	51.99	C
ATOM	761	C	ASN A 110	28.732	36.070	49.736	1.00	51.88	C
ATOM	762	O	ASN A 110	29.038	37.252	49.562	1.00	51.14	O
ATOM	763	CB	ASN A 110	30.876	34.939	48.994	1.00	52.43	C
ATOM	764	CG	ASN A 110	32.077	34.080	49.433	1.00	54.41	C
ATOM	765	OD1	ASN A 110	32.460	34.050	50.624	1.00	54.72	O
ATOM	766	ND2	ASN A 110	32.663	33.373	48.478	1.00	56.75	N
ATOM	767	N	PHE A 111	27.484	35.651	49.632	1.00	52.59	N
ATOM	768	CA	PHE A 111	26.404	36.598	49.409	1.00	53.32	C
ATOM	769	C	PHE A 111	25.202	36.180	50.261	1.00	54.75	C
ATOM	770	O	PHE A 111	24.149	35.801	49.749	1.00	54.37	O
ATOM	771	CB	PHE A 111	26.053	36.693	47.923	1.00	52.83	C
ATOM	772	CG	PHE A 111	27.058	37.461	47.107	1.00	50.42	C
ATOM	773	CD1	PHE A 111	28.283	36.907	46.791	1.00	49.93	C
ATOM	774	CD2	PHE A 111	26.781	38.729	46.658	1.00	48.60	C
ATOM	775	CE1	PHE A 111	29.205	37.609	46.044	1.00	49.18	C
ATOM	776	CE2	PHE A 111	27.701	39.429	45.904	1.00	47.91	C
ATOM	777	CZ	PHE A 111	28.910	38.869	45.601	1.00	47.42	C
ATOM	778	N	GLN A 112	25.376	36.279	51.576	1.00	56.74	N
ATOM	779	CA	GLN A 112	24.353	35.855	52.536	1.00	58.14	C
ATOM	780	C	GLN A 112	22.970	36.399	52.192	1.00	58.29	C
ATOM	781	O	GLN A 112	21.972	35.742	52.468	1.00	58.53	O
ATOM	782	CB	GLN A 112	24.730	36.282	53.961	1.00	58.65	C
ATOM	783	CG	GLN A 112	26.100	35.815	54.441	1.00	61.33	C
ATOM	784	CD	GLN A 112	26.213	34.307	54.467	1.00	64.34	C
ATOM	785	OE1	GLN A 112	25.483	33.622	53.750	1.00	66.46	O
ATOM	786	NE2	GLN A 112	27.133	33.784	55.281	1.00	66.00	N
ATOM	787	N	ASN A 113	22.919	37.581	51.580	1.00	58.45	N
ATOM	788	CA	ASN A 113	21.653	38.222	51.240	1.00	58.79	C
ATOM	789	C	ASN A 113	21.000	37.740	49.936	1.00	58.82	C
ATOM	790	O	ASN A 113	19.971	38.284	49.536	1.00	59.69	O
ATOM	791	CB	ASN A 113	21.813	39.759	51.171	1.00	58.81	C
ATOM	792	CG	ASN A 113	22.160	40.387	52.525	1.00	59.17	C
ATOM	793	OD1	ASN A 113	21.863	39.824	53.593	1.00	57.49	O
ATOM	794	ND2	ASN A 113	22.786	41.567	52.482	1.00	58.34	N
ATOM	795	N	PHE A 114	21.570	36.760	49.245	1.00	58.33	N
ATOM	796	CA	PHE A 114	20.930	36.306	48.015	1.00	57.84	C
ATOM	797	C	PHE A 114	19.922	35.220	48.334	1.00	57.57	C
ATOM	798	O	PHE A 114	20.264	34.208	48.953	1.00	57.24	O
ATOM	799	CB	PHE A 114	21.933	35.774	47.013	1.00	57.99	C
ATOM	800	CG	PHE A 114	21.289	35.126	45.822	1.00	58.28	C
ATOM	801	CD1	PHE A 114	20.642	35.897	44.867	1.00	58.11	C
ATOM	802	CD2	PHE A 114	21.300	33.744	45.674	1.00	58.56	C
ATOM	803	CE1	PHE A 114	20.028	35.312	43.781	1.00	58.29	C
ATOM	804	CE2	PHE A 114	20.687	33.149	44.580	1.00	59.09	C
ATOM	805	CZ	PHE A 114	20.050	33.937	43.630	1.00	58.80	C
ATOM	806	N	LYS A 115	18.686	35.429	47.899	1.00	57.18	N
ATOM	807	CA	LYS A 115	17.604	34.511	48.204	1.00	57.19	C
ATOM	808	C	LYS A 115	17.037	33.942	46.903	1.00	57.17	C
ATOM	809	O	LYS A 115	16.268	34.598	46.193	1.00	57.12	O
ATOM	810	CB	LYS A 115	16.524	35.234	49.016	1.00	57.33	C
ATOM	811	N	PRO A 116	17.384	32.699	46.610	1.00	56.97	N
ATOM	812	CA	PRO A 116	17.042	32.097	45.319	1.00	57.01	C
ATOM	813	C	PRO A 116	15.554	31.979	45.151	1.00	56.69	C

ATOM	814	O	PRO A 116	14.864	31.676	46.103	1.00	57.03	O
ATOM	815	CB	PRO A 116	17.672	30.701	45.378	1.00	57.15	C
ATOM	816	CG	PRO A 116	18.474	30.658	46.662	1.00	57.53	C
ATOM	817	CD	PRO A 116	18.045	31.763	47.522	1.00	57.03	C
ATOM	818	N	ARG A 117	15.073	32.212	43.945	1.00	56.65	N
ATOM	819	CA	ARG A 117	13.663	32.087	43.656	1.00	56.39	C
ATOM	820	C	ARG A 117	13.335	30.639	43.332	1.00	56.16	C
ATOM	821	O	ARG A 117	12.160	30.272	43.279	1.00	56.65	O
ATOM	822	CB	ARG A 117	13.280	32.971	42.508	1.00	56.56	C
ATOM	823	N	SER A 118	14.350	29.810	43.110	1.00	55.25	N
ATOM	824	CA	SER A 118	14.083	28.393	42.878	1.00	55.12	C
ATOM	825	C	SER A 118	14.924	27.511	43.809	1.00	54.45	C
ATOM	826	O	SER A 118	16.022	27.895	44.174	1.00	54.64	O
ATOM	827	CB	SER A 118	14.322	28.029	41.415	1.00	54.89	C
ATOM	828	OG	SER A 118	15.672	28.196	41.087	1.00	55.13	O
ATOM	829	N	ASN A 119	14.381	26.362	44.211	1.00	53.66	N
ATOM	830	CA	ASN A 119	15.089	25.412	45.060	1.00	53.43	C
ATOM	831	C	ASN A 119	15.307	24.118	44.326	1.00	51.73	C
ATOM	832	O	ASN A 119	14.472	23.705	43.552	1.00	51.23	O
ATOM	833	CB	ASN A 119	14.277	25.063	46.311	1.00	54.32	C
ATOM	834	CG	ASN A 119	13.711	26.272	46.994	1.00	57.18	C
ATOM	835	OD1	ASN A 119	14.448	27.099	47.563	1.00	60.84	O
ATOM	836	ND2	ASN A 119	12.384	26.384	46.964	1.00	61.01	N
ATOM	837	N	ARG A 120	16.418	23.470	44.621	1.00	50.77	N
ATOM	838	CA	ARG A 120	16.772	22.182	44.049	1.00	49.89	C
ATOM	839	C	ARG A 120	16.388	21.062	44.999	1.00	49.87	C
ATOM	840	O	ARG A 120	16.620	21.150	46.206	1.00	50.40	O
ATOM	841	CB	ARG A 120	18.283	22.133	43.843	1.00	49.75	C
ATOM	842	CG	ARG A 120	18.799	20.901	43.144	1.00	47.86	C
ATOM	843	CD	ARG A 120	20.318	20.812	43.074	1.00	45.29	C
ATOM	844	NE	ARG A 120	20.972	21.240	44.301	1.00	43.79	N
ATOM	845	CZ	ARG A 120	21.316	20.432	45.314	1.00	43.05	C
ATOM	846	NH1	ARG A 120	21.053	19.126	45.277	1.00	40.07	N
ATOM	847	NH2	ARG A 120	21.921	20.942	46.379	1.00	41.03	N
ATOM	848	N	GLU A 121	15.801	20.010	44.451	1.00	49.51	N
ATOM	849	CA	GLU A 121	15.435	18.830	45.206	1.00	48.90	C
ATOM	850	C	GLU A 121	15.905	17.609	44.411	1.00	47.95	C
ATOM	851	O	GLU A 121	15.793	17.564	43.192	1.00	48.02	O
ATOM	852	CB	GLU A 121	13.922	18.782	45.461	1.00	49.38	C
ATOM	853	CG	GLU A 121	13.444	17.500	46.141	1.00	51.77	C
ATOM	854	CD	GLU A 121	12.185	17.695	46.961	1.00	54.65	C
ATOM	855	OE1	GLU A 121	12.312	18.258	48.073	1.00	58.68	O
ATOM	856	OE2	GLU A 121	11.087	17.284	46.512	1.00	55.59	O
ATOM	857	N	GLU A 122	16.455	16.622	45.104	1.00	47.05	N
ATOM	858	CA	GLU A 122	16.938	15.423	44.463	1.00	46.05	C
ATOM	859	C	GLU A 122	15.848	14.400	44.594	1.00	45.48	C
ATOM	860	O	GLU A 122	15.313	14.220	45.666	1.00	45.63	O
ATOM	861	CB	GLU A 122	18.200	14.940	45.158	1.00	45.67	C
ATOM	862	CG	GLU A 122	19.346	15.921	45.063	1.00	44.97	C
ATOM	863	CD	GLU A 122	19.789	16.154	43.623	1.00	45.49	C
ATOM	864	OE1	GLU A 122	19.985	15.144	42.902	1.00	44.79	O
ATOM	865	OE2	GLU A 122	19.925	17.337	43.207	1.00	42.47	O
ATOM	866	N	MET A 123	15.481	13.751	43.503	1.00	44.95	N
ATOM	867	CA	MET A 123	14.462	12.731	43.589	1.00	44.35	C
ATOM	868	C	MET A 123	14.657	11.712	42.503	1.00	43.59	C
ATOM	869	O	MET A 123	15.495	11.891	41.613	1.00	43.44	O
ATOM	870	CB	MET A 123	13.078	13.358	43.490	1.00	44.59	C
ATOM	871	CG	MET A 123	12.831	14.092	42.205	1.00	45.95	C
ATOM	872	SD	MET A 123	11.244	14.946	42.206	1.00	47.99	S
ATOM	873	CE	MET A 123	11.648	16.411	43.089	1.00	47.81	C
ATOM	874	N	LYS A 124	13.880	10.638	42.603	1.00	42.37	N

ATOM	875	CA	LYS	A	124	13.869	9.575	41.623	1.00	41.47	C
ATOM	876	C	LYS	A	124	12.958	10.026	40.469	1.00	40.66	C
ATOM	877	O	LYS	A	124	12.066	10.862	40.654	1.00	39.80	O
ATOM	878	CB	LYS	A	124	13.354	8.267	42.250	1.00	41.45	C
ATOM	879	CG	LYS	A	124	14.160	7.756	43.470	1.00	41.70	C
ATOM	880	CD	LYS	A	124	15.574	7.301	43.076	1.00	42.20	C
ATOM	881	CE	LYS	A	124	16.451	6.989	44.273	1.00	41.37	C
ATOM	882	NZ	LYS	A	124	17.894	7.201	43.966	1.00	41.63	N
ATOM	883	N	PHE	A	125	13.178	9.460	39.284	1.00	39.69	N
ATOM	884	CA	PHE	A	125	12.463	9.889	38.101	1.00	38.95	C
ATOM	885	C	PHE	A	125	10.981	9.729	38.257	1.00	38.85	C
ATOM	886	O	PHE	A	125	10.217	10.613	37.890	1.00	37.81	O
ATOM	887	CB	PHE	A	125	12.942	9.154	36.862	1.00	38.45	C
ATOM	888	CG	PHE	A	125	12.618	9.871	35.610	1.00	39.49	C
ATOM	889	CD1	PHE	A	125	13.471	10.840	35.118	1.00	40.78	C
ATOM	890	CD2	PHE	A	125	11.428	9.655	34.967	1.00	40.81	C
ATOM	891	CE1	PHE	A	125	13.181	11.530	33.992	1.00	40.48	C
ATOM	892	CE2	PHE	A	125	11.123	10.353	33.825	1.00	41.39	C
ATOM	893	CZ	PHE	A	125	12.008	11.300	33.335	1.00	41.11	C
ATOM	894	N	HIS	A	126	10.575	8.602	38.835	1.00	39.49	N
ATOM	895	CA	HIS	A	126	9.161	8.342	39.044	1.00	39.91	C
ATOM	896	C	HIS	A	126	8.599	9.408	39.976	1.00	39.98	C
ATOM	897	O	HIS	A	126	7.455	9.821	39.830	1.00	39.26	O
ATOM	898	CB	HIS	A	126	8.906	6.899	39.552	1.00	40.45	C
ATOM	899	CG	HIS	A	126	9.034	6.727	41.033	1.00	41.06	C
ATOM	900	ND1	HIS	A	126	7.987	6.950	41.899	1.00	40.98	N
ATOM	901	CD2	HIS	A	126	10.092	6.367	41.801	1.00	41.92	C
ATOM	902	CE1	HIS	A	126	8.403	6.759	43.140	1.00	43.22	C
ATOM	903	NE2	HIS	A	126	9.676	6.405	43.108	1.00	42.45	N
ATOM	904	N	GLU	A	127	9.428	9.898	40.890	1.00	40.59	N
ATOM	905	CA	GLU	A	127	8.975	10.919	41.824	1.00	41.56	C
ATOM	906	C	GLU	A	127	8.749	12.213	41.062	1.00	41.66	C
ATOM	907	O	GLU	A	127	7.774	12.941	41.294	1.00	41.64	O
ATOM	908	CB	GLU	A	127	9.968	11.102	42.978	1.00	41.64	C
ATOM	909	CG	GLU	A	127	10.149	9.839	43.811	1.00	43.10	C
ATOM	910	CD	GLU	A	127	11.116	10.017	44.958	1.00	44.79	C
ATOM	911	OE1	GLU	A	127	12.326	10.217	44.712	1.00	43.71	O
ATOM	912	OE2	GLU	A	127	10.649	9.938	46.122	1.00	49.43	O
ATOM	913	N	PHE	A	128	9.636	12.491	40.124	1.00	41.96	N
ATOM	914	CA	PHE	A	128	9.504	13.705	39.337	1.00	41.99	C
ATOM	915	C	PHE	A	128	8.213	13.612	38.538	1.00	42.56	C
ATOM	916	O	PHE	A	128	7.400	14.537	38.507	1.00	41.93	O
ATOM	917	CB	PHE	A	128	10.708	13.864	38.416	1.00	41.57	C
ATOM	918	CG	PHE	A	128	10.470	14.795	37.244	1.00	41.38	C
ATOM	919	CD1	PHE	A	128	10.199	16.136	37.449	1.00	39.65	C
ATOM	920	CD2	PHE	A	128	10.537	14.330	35.950	1.00	39.22	C
ATOM	921	CE1	PHE	A	128	9.980	16.975	36.399	1.00	40.36	C
ATOM	922	CE2	PHE	A	128	10.329	15.191	34.888	1.00	41.57	C
ATOM	923	CZ	PHE	A	128	10.044	16.510	35.112	1.00	40.14	C
ATOM	924	N	VAL	A	129	7.999	12.463	37.921	1.00	43.85	N
ATOM	925	CA	VAL	A	129	6.813	12.288	37.095	1.00	44.87	C
ATOM	926	C	VAL	A	129	5.536	12.443	37.932	1.00	46.07	C
ATOM	927	O	VAL	A	129	4.574	13.093	37.505	1.00	45.32	O
ATOM	928	CB	VAL	A	129	6.798	10.920	36.425	1.00	44.99	C
ATOM	929	CG1	VAL	A	129	5.496	10.725	35.631	1.00	44.81	C
ATOM	930	CG2	VAL	A	129	8.030	10.718	35.550	1.00	43.96	C
ATOM	931	N	GLU	A	130	5.553	11.854	39.128	1.00	47.64	N
ATOM	932	CA	GLU	A	130	4.415	11.932	40.037	1.00	49.12	C
ATOM	933	C	GLU	A	130	4.136	13.390	40.384	1.00	49.48	C
ATOM	934	O	GLU	A	130	3.003	13.846	40.250	1.00	48.66	O
ATOM	935	CB	GLU	A	130	4.654	11.079	41.296	1.00	49.63	C

ATOM	936	CG	GLU A 130	4.534	9.576	41.062	1.00	50.81	C
ATOM	937	CD	GLU A 130	5.257	8.747	42.117	1.00	53.77	C
ATOM	938	OE1	GLU A 130	5.566	9.295	43.204	1.00	55.27	O
ATOM	939	OE2	GLU A 130	5.518	7.543	41.856	1.00	54.73	O
ATOM	940	N	LYS A 131	5.170	14.121	40.798	1.00	50.56	N
ATOM	941	CA	LYS A 131	5.010	15.547	41.082	1.00	51.84	C
ATOM	942	C	LYS A 131	4.385	16.276	39.886	1.00	52.55	C
ATOM	943	O	LYS A 131	3.482	17.070	40.061	1.00	52.15	O
ATOM	944	CB	LYS A 131	6.340	16.209	41.438	1.00	52.23	C
ATOM	945	CG	LYS A 131	6.554	16.568	42.907	1.00	53.75	C
ATOM	946	CD	LYS A 131	7.249	17.944	43.054	1.00	56.27	C
ATOM	947	CE	LYS A 131	7.879	18.168	44.448	1.00	58.66	C
ATOM	948	NZ	LYS A 131	8.247	19.628	44.725	1.00	59.31	N
ATOM	949	N	LEU A 132	4.845	16.014	38.667	1.00	53.84	N
ATOM	950	CA	LEU A 132	4.247	16.691	37.513	1.00	55.23	C
ATOM	951	C	LEU A 132	2.762	16.408	37.407	1.00	55.96	C
ATOM	952	O	LEU A 132	1.973	17.292	37.063	1.00	55.69	O
ATOM	953	CB	LEU A 132	4.906	16.278	36.206	1.00	55.45	C
ATOM	954	CG	LEU A 132	6.301	16.811	35.966	1.00	56.60	C
ATOM	955	CD1	LEU A 132	6.785	16.291	34.646	1.00	57.60	C
ATOM	956	CD2	LEU A 132	6.303	18.327	35.966	1.00	57.89	C
ATOM	957	N	GLN A 133	2.397	15.157	37.669	1.00	57.19	N
ATOM	958	CA	GLN A 133	0.998	14.739	37.663	1.00	58.15	C
ATOM	959	C	GLN A 133	0.172	15.450	38.751	1.00	58.99	C
ATOM	960	O	GLN A 133	-0.915	15.950	38.470	1.00	58.73	O
ATOM	961	CB	GLN A 133	0.897	13.230	37.824	1.00	58.03	C
ATOM	962	N	ASP A 134	0.678	15.510	39.981	1.00	60.11	N
ATOM	963	CA	ASP A 134	-0.081	16.145	41.063	1.00	61.49	C
ATOM	964	C	ASP A 134	-0.362	17.629	40.783	1.00	61.55	C
ATOM	965	O	ASP A 134	-1.427	18.149	41.104	1.00	61.55	O
ATOM	966	CB	ASP A 134	0.621	15.985	42.417	1.00	61.99	C
ATOM	967	CG	ASP A 134	-0.253	16.454	43.587	1.00	64.74	C
ATOM	968	OD1	ASP A 134	-1.310	17.082	43.346	1.00	67.52	O
ATOM	969	OD2	ASP A 134	0.022	16.237	44.791	1.00	69.05	O
ATOM	970	N	ILE A 135	0.594	18.312	40.179	1.00	61.80	N
ATOM	971	CA	ILE A 135	0.402	19.706	39.860	1.00	62.08	C
ATOM	972	C	ILE A 135	-0.700	19.856	38.823	1.00	62.29	C
ATOM	973	O	ILE A 135	-1.639	20.620	39.013	1.00	61.91	O
ATOM	974	CB	ILE A 135	1.711	20.301	39.366	1.00	62.21	C
ATOM	975	CG1	ILE A 135	2.705	20.391	40.528	1.00	62.47	C
ATOM	976	CG2	ILE A 135	1.478	21.670	38.783	1.00	62.19	C
ATOM	977	CD1	ILE A 135	4.157	20.437	40.100	1.00	62.96	C
ATOM	978	N	GLN A 136	-0.593	19.112	37.733	1.00	62.99	N
ATOM	979	CA	GLN A 136	-1.585	19.184	36.674	1.00	63.71	C
ATOM	980	C	GLN A 136	-2.977	18.992	37.259	1.00	64.44	C
ATOM	981	O	GLN A 136	-3.844	19.856	37.123	1.00	64.73	O
ATOM	982	CB	GLN A 136	-1.305	18.136	35.619	1.00	63.77	C
ATOM	983	N	GLN A 137	-3.170	17.871	37.948	1.00	65.12	N
ATOM	984	CA	GLN A 137	-4.472	17.509	38.497	1.00	65.60	C
ATOM	985	C	GLN A 137	-4.989	18.540	39.477	1.00	65.70	C
ATOM	986	O	GLN A 137	-6.175	18.871	39.447	1.00	66.17	O
ATOM	987	CB	GLN A 137	-4.421	16.117	39.161	1.00	65.72	C
ATOM	988	N	ARG A 138	-4.115	19.056	40.336	1.00	65.61	N
ATOM	989	CA	ARG A 138	-4.549	20.011	41.358	1.00	65.53	C
ATOM	990	C	ARG A 138	-4.578	21.441	40.823	1.00	64.96	C
ATOM	991	O	ARG A 138	-4.748	22.392	41.589	1.00	64.93	O
ATOM	992	CB	ARG A 138	-3.670	19.912	42.613	1.00	65.65	C
ATOM	993	CG	ARG A 138	-2.375	20.712	42.588	1.00	67.10	C
ATOM	994	CD	ARG A 138	-1.482	20.352	43.745	1.00	68.96	C
ATOM	995	NE	ARG A 138	-0.372	21.270	43.957	1.00	69.79	N
ATOM	996	CZ	ARG A 138	0.905	20.919	43.880	1.00	71.69	C

ATOM	997	NH1	ARG	A	138	1.238	19.674	43.569	1.00	72.88	N
ATOM	998	NH2	ARG	A	138	1.862	21.811	44.106	1.00	72.52	N
ATOM	999	N	GLY	A	139	-4.426	21.593	39.508	1.00	64.31	N
ATOM	1000	CA	GLY	A	139	-4.370	22.912	38.897	1.00	63.53	C
ATOM	1001	C	GLY	A	139	-3.401	23.874	39.578	1.00	62.69	C
ATOM	1002	O	GLY	A	139	-3.631	25.080	39.570	1.00	62.92	O
ATOM	1003	N	GLY	A	140	-2.312	23.357	40.148	1.00	61.58	N
ATOM	1004	CA	GLY	A	140	-1.345	24.183	40.861	1.00	60.52	C
ATOM	1005	C	GLY	A	140	-0.539	25.103	39.958	1.00	59.56	C
ATOM	1006	O	GLY	A	140	-0.449	24.867	38.748	1.00	59.45	O
ATOM	1007	N	GLU	A	141	0.041	26.159	40.530	1.00	58.05	N
ATOM	1008	CA	GLU	A	141	0.859	27.090	39.748	1.00	56.92	C
ATOM	1009	C	GLU	A	141	2.366	26.751	39.832	1.00	54.97	C
ATOM	1010	O	GLU	A	141	3.189	27.326	39.113	1.00	54.51	O
ATOM	1011	CB	GLU	A	141	0.602	28.547	40.177	1.00	57.45	C
ATOM	1012	CG	GLU	A	141	-0.707	29.171	39.680	1.00	59.67	C
ATOM	1013	CD	GLU	A	141	-0.851	29.193	38.154	1.00	63.48	C
ATOM	1014	OE1	GLU	A	141	0.179	29.107	37.436	1.00	65.30	O
ATOM	1015	OE2	GLU	A	141	-2.007	29.298	37.664	1.00	66.13	O
ATOM	1016	N	GLU	A	142	2.720	25.814	40.708	1.00	52.62	N
ATOM	1017	CA	GLU	A	142	4.106	25.398	40.862	1.00	50.91	C
ATOM	1018	C	GLU	A	142	4.679	24.958	39.516	1.00	48.93	C
ATOM	1019	O	GLU	A	142	3.960	24.477	38.641	1.00	48.64	O
ATOM	1020	CB	GLU	A	142	4.225	24.263	41.886	1.00	51.00	C
ATOM	1021	CG	GLU	A	142	5.656	24.005	42.352	1.00	51.76	C
ATOM	1022	CD	GLU	A	142	5.814	22.811	43.282	1.00	52.64	C
ATOM	1023	OE1	GLU	A	142	4.871	22.009	43.447	1.00	55.52	O
ATOM	1024	OE2	GLU	A	142	6.911	22.667	43.855	1.00	53.97	O
ATOM	1025	N	ARG	A	143	5.979	25.139	39.356	1.00	46.58	N
ATOM	1026	CA	ARG	A	143	6.652	24.751	38.133	1.00	45.12	C
ATOM	1027	C	ARG	A	143	7.900	23.960	38.425	1.00	43.39	C
ATOM	1028	O	ARG	A	143	8.616	24.242	39.387	1.00	43.58	O
ATOM	1029	CB	ARG	A	143	7.069	25.983	37.360	1.00	45.52	C
ATOM	1030	CG	ARG	A	143	5.943	26.747	36.729	1.00	45.38	C
ATOM	1031	CD	ARG	A	143	6.488	27.899	35.969	1.00	46.06	C
ATOM	1032	NE	ARG	A	143	5.473	28.649	35.252	1.00	45.33	N
ATOM	1033	CZ	ARG	A	143	5.194	28.491	33.984	1.00	42.93	C
ATOM	1034	NH1	ARG	A	143	5.836	27.573	33.253	1.00	41.86	N
ATOM	1035	NH2	ARG	A	143	4.257	29.252	33.452	1.00	43.53	N
ATOM	1036	N	LEU	A	144	8.182	22.991	37.578	1.00	41.08	N
ATOM	1037	CA	LEU	A	144	9.337	22.163	37.784	1.00	39.63	C
ATOM	1038	C	LEU	A	144	10.213	22.166	36.568	1.00	37.88	C
ATOM	1039	O	LEU	A	144	9.734	22.249	35.444	1.00	36.26	O
ATOM	1040	CB	LEU	A	144	8.889	20.727	38.018	1.00	40.26	C
ATOM	1041	CG	LEU	A	144	7.974	20.529	39.223	1.00	41.73	C
ATOM	1042	CD1	LEU	A	144	7.639	19.036	39.392	1.00	42.57	C
ATOM	1043	CD2	LEU	A	144	8.585	21.102	40.503	1.00	41.42	C
ATOM	1044	N	TYR	A	145	11.507	22.033	36.800	1.00	36.36	N
ATOM	1045	CA	TYR	A	145	12.434	21.892	35.703	1.00	35.24	C
ATOM	1046	C	TYR	A	145	13.485	20.862	36.107	1.00	34.89	C
ATOM	1047	O	TYR	A	145	14.264	21.098	37.013	1.00	33.74	O
ATOM	1048	CB	TYR	A	145	13.071	23.243	35.352	1.00	35.01	C
ATOM	1049	CG	TYR	A	145	13.524	23.408	33.901	1.00	32.68	C
ATOM	1050	CD1	TYR	A	145	13.817	22.324	33.099	1.00	30.20	C
ATOM	1051	CD2	TYR	A	145	13.689	24.666	33.355	1.00	31.53	C
ATOM	1052	CE1	TYR	A	145	14.237	22.493	31.762	1.00	29.87	C
ATOM	1053	CE2	TYR	A	145	14.110	24.852	32.031	1.00	29.82	C
ATOM	1054	CZ	TYR	A	145	14.373	23.765	31.228	1.00	30.06	C
ATOM	1055	OH	TYR	A	145	14.789	23.953	29.897	1.00	28.17	O
ATOM	1056	N	LEU	A	146	13.479	19.708	35.446	1.00	34.87	N
ATOM	1057	CA	LEU	A	146	14.511	18.703	35.690	1.00	35.40	C

ATOM	1058	C	LEU A 146	15.753	18.977	34.864	1.00	35.24	C
ATOM	1059	O	LEU A 146	15.665	19.211	33.653	1.00	34.63	O
ATOM	1060	CB	LEU A 146	14.008	17.312	35.358	1.00	35.79	C
ATOM	1061	CG	LEU A 146	14.998	16.157	35.614	1.00	37.21	C
ATOM	1062	CD1	LEU A 146	14.221	14.918	35.969	1.00	36.28	C
ATOM	1063	CD2	LEU A 146	15.907	15.872	34.399	1.00	38.78	C
ATOM	1064	N	GLN A 147	16.907	18.883	35.515	1.00	34.82	N
ATOM	1065	CA	GLN A 147	18.179	19.206	34.884	1.00	35.00	C
ATOM	1066	C	GLN A 147	19.222	18.341	35.525	1.00	34.90	C
ATOM	1067	O	GLN A 147	19.626	18.568	36.664	1.00	35.65	O
ATOM	1068	CB	GLN A 147	18.526	20.679	35.078	1.00	35.09	C
ATOM	1069	CG	GLN A 147	17.392	21.636	34.720	1.00	35.83	C
ATOM	1070	CD	GLN A 147	17.848	23.085	34.706	1.00	36.90	C
ATOM	1071	OE1	GLN A 147	17.091	23.961	34.302	1.00	39.61	O
ATOM	1072	NE2	GLN A 147	19.088	23.336	35.126	1.00	35.05	N
ATOM	1073	N	GLN A 148	19.673	17.358	34.773	1.00	35.00	N
ATOM	1074	CA	GLN A 148	20.492	16.300	35.294	1.00	34.89	C
ATOM	1075	C	GLN A 148	21.376	15.709	34.255	1.00	35.35	C
ATOM	1076	O	GLN A 148	20.941	15.318	33.181	1.00	35.25	O
ATOM	1077	CB	GLN A 148	19.580	15.186	35.791	1.00	35.27	C
ATOM	1078	CG	GLN A 148	20.335	13.914	36.269	1.00	35.11	C
ATOM	1079	CD	GLN A 148	21.317	14.230	37.389	1.00	34.12	C
ATOM	1080	OE1	GLN A 148	20.998	15.033	38.277	1.00	33.18	O
ATOM	1081	NE2	GLN A 148	22.521	13.652	37.324	1.00	30.47	N
ATOM	1082	N	THR A 149	22.631	15.641	34.600	1.00	36.56	N
ATOM	1083	CA	THR A 149	23.648	15.088	33.754	1.00	38.26	C
ATOM	1084	C	THR A 149	23.394	13.609	33.615	1.00	38.31	C
ATOM	1085	O	THR A 149	23.068	12.956	34.597	1.00	38.70	O
ATOM	1086	CB	THR A 149	24.992	15.362	34.463	1.00	38.76	C
ATOM	1087	OG1	THR A 149	25.290	16.747	34.277	1.00	41.68	O
ATOM	1088	CG2	THR A 149	26.139	14.710	33.797	1.00	40.77	C
ATOM	1089	N	LEU A 150	23.516	13.087	32.399	1.00	38.77	N
ATOM	1090	CA	LEU A 150	23.373	11.664	32.149	1.00	39.27	C
ATOM	1091	C	LEU A 150	24.604	10.898	32.679	1.00	39.85	C
ATOM	1092	O	LEU A 150	25.733	11.207	32.321	1.00	39.99	O
ATOM	1093	CB	LEU A 150	23.220	11.402	30.660	1.00	39.15	C
ATOM	1094	CG	LEU A 150	21.943	11.860	29.962	1.00	40.72	C
ATOM	1095	CD1	LEU A 150	22.058	11.673	28.459	1.00	41.91	C
ATOM	1096	CD2	LEU A 150	20.764	11.106	30.458	1.00	41.30	C
ATOM	1097	N	ASN A 151	24.392	9.898	33.526	1.00	40.26	N
ATOM	1098	CA	ASN A 151	25.510	9.124	34.062	1.00	40.90	C
ATOM	1099	C	ASN A 151	25.291	7.607	34.041	1.00	41.95	C
ATOM	1100	O	ASN A 151	24.327	7.098	33.441	1.00	41.72	O
ATOM	1101	CB	ASN A 151	25.778	9.575	35.489	1.00	40.77	C
ATOM	1102	CG	ASN A 151	24.564	9.439	36.349	1.00	39.85	C
ATOM	1103	OD1	ASN A 151	24.002	8.340	36.483	1.00	37.92	O
ATOM	1104	ND2	ASN A 151	24.107	10.558	36.897	1.00	36.89	N
ATOM	1105	N	ASP A 152	26.176	6.894	34.735	1.00	42.89	N
ATOM	1106	CA	ASP A 152	26.175	5.431	34.756	1.00	43.75	C
ATOM	1107	C	ASP A 152	24.950	4.768	35.272	1.00	43.37	C
ATOM	1108	O	ASP A 152	24.787	3.581	35.052	1.00	43.66	O
ATOM	1109	CB	ASP A 152	27.256	4.895	35.695	1.00	44.77	C
ATOM	1110	CG	ASP A 152	28.539	5.555	35.500	1.00	48.22	C
ATOM	1111	OD1	ASP A 152	28.835	5.881	34.325	1.00	57.47	O
ATOM	1112	OD2	ASP A 152	29.291	5.826	36.437	1.00	51.28	O
ATOM	1113	N	THR A 153	24.119	5.466	36.025	1.00	43.41	N
ATOM	1114	CA	THR A 153	22.983	4.783	36.631	1.00	43.38	C
ATOM	1115	C	THR A 153	21.820	4.605	35.676	1.00	42.99	C
ATOM	1116	O	THR A 153	20.866	3.945	36.012	1.00	43.44	O
ATOM	1117	CB	THR A 153	22.489	5.507	37.875	1.00	43.44	C
ATOM	1118	OG1	THR A 153	21.749	6.678	37.499	1.00	46.09	O

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ATOM   1119  CG2 THR A 153     23.651   6.008  38.725  1.00 42.99        C
ATOM   1120  N   VAL A 154     21.874   5.185  34.491  1.00 42.88        N
ATOM   1121  CA  VAL A 154     20.757   5.015  33.572  1.00 42.71        C
ATOM   1122  C   VAL A 154     20.700   3.563  33.177  1.00 42.42        C
ATOM   1123  O   VAL A 154     21.729   2.892  33.193  1.00 42.39        O
ATOM   1124  CB  VAL A 154     20.889   5.875  32.300  1.00 42.67        C
ATOM   1125  CG1 VAL A 154     20.857   7.347  32.660  1.00 43.04        C
ATOM   1126  CG2 VAL A 154     22.159   5.516  31.538  1.00 42.56        C
ATOM   1127  N   GLY A 155     19.502   3.097  32.814  1.00 42.11        N
ATOM   1128  CA  GLY A 155     19.261   1.725  32.411  1.00 41.52        C
ATOM   1129  C   GLY A 155     19.642   1.317  30.992  1.00 41.85        C
ATOM   1130  O   GLY A 155     19.977   2.140  30.123  1.00 41.87        O
ATOM   1131  N   ARG A 156     19.512   0.012  30.750  1.00 41.36        N
ATOM   1132  CA  ARG A 156     19.961  -0.623  29.511  1.00 40.88        C
ATOM   1133  C   ARG A 156     19.397  -0.005  28.247  1.00 40.03        C
ATOM   1134  O   ARG A 156     20.135   0.304  27.339  1.00 40.36        O
ATOM   1135  CB  ARG A 156     19.670  -2.148  29.555  1.00 40.77        C
ATOM   1136  N   LYS A 157     18.090   0.146  28.181  1.00 39.16        N
ATOM   1137  CA  LYS A 157     17.503   0.697  26.990  1.00 38.81        C
ATOM   1138  C   LYS A 157     18.078   2.114  26.738  1.00 38.38        C
ATOM   1139  O   LYS A 157     18.363   2.464  25.594  1.00 37.97        O
ATOM   1140  CB  LYS A 157     15.968   0.714  27.090  1.00 39.20        C
ATOM   1141  CG  LYS A 157     15.266  -0.575  26.642  1.00 36.80        C
ATOM   1142  N   ILE A 158     18.268   2.909  27.791  1.00 37.56        N
ATOM   1143  CA  ILE A 158     18.759   4.287  27.606  1.00 37.28        C
ATOM   1144  C   ILE A 158     20.180   4.281  27.126  1.00 37.22        C
ATOM   1145  O   ILE A 158     20.582   5.120  26.302  1.00 37.08        O
ATOM   1146  CB  ILE A 158     18.692   5.101  28.882  1.00 36.72        C
ATOM   1147  CG1 ILE A 158     17.257   5.220  29.356  1.00 37.17        C
ATOM   1148  CG2 ILE A 158     19.254   6.465  28.646  1.00 36.48        C
ATOM   1149  CD1 ILE A 158     16.359   5.900  28.409  1.00 38.28        C
ATOM   1150  N   VAL A 159     20.934   3.335  27.655  1.00 36.85        N
ATOM   1151  CA  VAL A 159     22.319   3.177  27.284  1.00 37.05        C
ATOM   1152  C   VAL A 159     22.349   2.864  25.785  1.00 36.45        C
ATOM   1153  O   VAL A 159     23.165   3.410  25.057  1.00 35.81        O
ATOM   1154  CB  VAL A 159     22.988   2.042  28.096  1.00 37.36        C
ATOM   1155  CG1 VAL A 159     24.248   1.567  27.427  1.00 38.43        C
ATOM   1156  CG2 VAL A 159     23.302   2.499  29.494  1.00 37.81        C
ATOM   1157  N   MET A 160     21.453   1.990  25.339  1.00 35.84        N
ATOM   1158  CA  MET A 160     21.369   1.637  23.910  1.00 36.30        C
ATOM   1159  C   MET A 160     21.064   2.883  23.074  1.00 34.46        C
ATOM   1160  O   MET A 160     21.715   3.142  22.083  1.00 33.88        O
ATOM   1161  CB  MET A 160     20.294   0.576  23.656  1.00 36.83        C
ATOM   1162  CG  MET A 160     20.654  -0.763  24.225  1.00 39.89        C
ATOM   1163  SD  MET A 160     21.916  -1.579  23.249  1.00 46.87        S
ATOM   1164  CE  MET A 160     21.005  -1.940  21.669  1.00 47.08        C
ATOM   1165  N   ASP A 161     20.078   3.648  23.505  1.00 33.13        N
ATOM   1166  CA  ASP A 161     19.732   4.901  22.857  1.00 32.80        C
ATOM   1167  C   ASP A 161     20.931   5.877  22.747  1.00 31.75        C
ATOM   1168  O   ASP A 161     21.209   6.425  21.691  1.00 31.06        O
ATOM   1169  CB  ASP A 161     18.598   5.553  23.631  1.00 32.93        C
ATOM   1170  CG  ASP A 161     17.278   4.822  23.473  1.00 33.90        C
ATOM   1171  OD1 ASP A 161     17.148   3.961  22.568  1.00 28.71        O
ATOM   1172  OD2 ASP A 161     16.301   5.064  24.226  1.00 38.17        O
ATOM   1173  N   PHE A 162     21.646   6.052  23.849  1.00 31.05        N
ATOM   1174  CA  PHE A 162     22.763   6.968  23.930  1.00 30.52        C
ATOM   1175  C   PHE A 162     23.835   6.553  22.979  1.00 28.89        C
ATOM   1176  O   PHE A 162     24.477   7.369  22.371  1.00 29.43        O
ATOM   1177  CB  PHE A 162     23.311   6.948  25.375  1.00 30.80        C
ATOM   1178  CG  PHE A 162     24.493   7.839  25.617  1.00 31.81        C
ATOM   1179  CD1 PHE A 162     24.325   9.179  25.904  1.00 35.81        C
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ATOM	1180	CD2	PHE A 162	25.770	7.322	25.653	1.00	35.00	C
ATOM	1181	CE1	PHE A 162	25.430	10.000	26.197	1.00	35.94	C
ATOM	1182	CE2	PHE A 162	26.887	8.143	25.941	1.00	35.90	C
ATOM	1183	CZ	PHE A 162	26.711	9.467	26.202	1.00	35.61	C
ATOM	1184	N	LEU A 163	24.067	5.271	22.914	1.00	28.19	N
ATOM	1185	CA	LEU A 163	25.103	4.728	22.065	1.00	28.08	C
ATOM	1186	C	LEU A 163	24.735	4.923	20.590	1.00	27.13	C
ATOM	1187	O	LEU A 163	25.603	4.973	19.751	1.00	26.83	O
ATOM	1188	CB	LEU A 163	25.306	3.244	22.368	1.00	27.86	C
ATOM	1189	CG	LEU A 163	26.137	2.987	23.604	1.00	28.73	C
ATOM	1190	CD1	LEU A 163	26.180	1.512	23.849	1.00	29.77	C
ATOM	1191	CD2	LEU A 163	27.559	3.522	23.464	1.00	29.70	C
ATOM	1192	N	GLY A 164	23.448	4.998	20.303	1.00	26.50	N
ATOM	1193	CA	GLY A 164	22.956	5.244	18.959	1.00	27.37	C
ATOM	1194	C	GLY A 164	22.949	6.712	18.493	1.00	27.88	C
ATOM	1195	O	GLY A 164	22.483	6.988	17.365	1.00	28.42	O
ATOM	1196	N	PHE A 165	23.420	7.635	19.344	1.00	26.36	N
ATOM	1197	CA	PHE A 165	23.530	9.011	18.958	1.00	26.57	C
ATOM	1198	C	PHE A 165	24.540	9.052	17.820	1.00	26.12	C
ATOM	1199	O	PHE A 165	25.381	8.202	17.756	1.00	24.23	O
ATOM	1200	CB	PHE A 165	24.024	9.867	20.153	1.00	26.86	C
ATOM	1201	CG	PHE A 165	22.979	10.070	21.252	1.00	27.80	C
ATOM	1202	CD1	PHE A 165	21.701	9.533	21.144	1.00	27.80	C
ATOM	1203	CD2	PHE A 165	23.274	10.820	22.367	1.00	28.58	C
ATOM	1204	CE1	PHE A 165	20.765	9.744	22.117	1.00	26.89	C
ATOM	1205	CE2	PHE A 165	22.329	11.042	23.364	1.00	28.45	C
ATOM	1206	CZ	PHE A 165	21.086	10.504	23.243	1.00	28.78	C
ATOM	1207	N	ASN A 166	24.496	10.077	16.963	1.00	26.15	N
ATOM	1208	CA	ASN A 166	25.441	10.165	15.837	1.00	25.91	C
ATOM	1209	C	ASN A 166	26.861	10.675	16.226	1.00	26.12	C
ATOM	1210	O	ASN A 166	27.288	11.793	15.894	1.00	25.48	O
ATOM	1211	CB	ASN A 166	24.834	11.004	14.705	1.00	25.51	C
ATOM	1212	CG	ASN A 166	25.634	10.916	13.431	1.00	24.43	C
ATOM	1213	OD1	ASN A 166	26.751	10.323	13.429	1.00	23.40	O
ATOM	1214	ND2	ASN A 166	25.078	11.479	12.318	1.00	17.22	N
ATOM	1215	N	TRP A 167	27.566	9.817	16.940	1.00	26.11	N
ATOM	1216	CA	TRP A 167	28.907	10.080	17.401	1.00	26.58	C
ATOM	1217	C	TRP A 167	29.817	10.336	16.206	1.00	27.07	C
ATOM	1218	O	TRP A 167	30.737	11.139	16.252	1.00	26.92	O
ATOM	1219	CB	TRP A 167	29.389	8.860	18.249	1.00	26.02	C
ATOM	1220	CG	TRP A 167	28.537	8.750	19.498	1.00	27.18	C
ATOM	1221	CD1	TRP A 167	27.620	7.784	19.809	1.00	28.08	C
ATOM	1222	CD2	TRP A 167	28.452	9.719	20.550	1.00	27.33	C
ATOM	1223	NE1	TRP A 167	27.013	8.071	21.013	1.00	27.87	N
ATOM	1224	CE2	TRP A 167	27.503	9.254	21.481	1.00	26.46	C
ATOM	1225	CE3	TRP A 167	29.103	10.929	20.804	1.00	26.22	C
ATOM	1226	CZ2	TRP A 167	27.180	9.951	22.622	1.00	28.27	C
ATOM	1227	CZ3	TRP A 167	28.784	11.615	21.920	1.00	27.56	C
ATOM	1228	CH2	TRP A 167	27.821	11.128	22.833	1.00	28.04	C
ATOM	1229	N	ASN A 168	29.585	9.632	15.114	1.00	27.98	N
ATOM	1230	CA	ASN A 168	30.430	9.833	13.959	1.00	28.32	C
ATOM	1231	C	ASN A 168	30.470	11.319	13.573	1.00	29.00	C
ATOM	1232	O	ASN A 168	31.547	11.894	13.390	1.00	30.41	O
ATOM	1233	CB	ASN A 168	29.909	9.018	12.812	1.00	28.58	C
ATOM	1234	CG	ASN A 168	30.758	9.145	11.570	1.00	29.28	C
ATOM	1235	OD1	ASN A 168	31.899	8.739	11.579	1.00	30.27	O
ATOM	1236	ND2	ASN A 168	30.186	9.677	10.487	1.00	28.46	N
ATOM	1237	N	TRP A 169	29.301	11.942	13.462	1.00	27.93	N
ATOM	1238	CA	TRP A 169	29.228	13.343	13.074	1.00	27.25	C
ATOM	1239	C	TRP A 169	29.726	14.266	14.179	1.00	27.20	C
ATOM	1240	O	TRP A 169	30.444	15.224	13.925	1.00	26.30	O

ATOM	1241	CB	TRP	A	169	27.777	13.734	12.691	1.00	26.63	C
ATOM	1242	CG	TRP	A	169	27.615	15.168	12.355	1.00	25.15	C
ATOM	1243	CD1	TRP	A	169	27.804	15.745	11.130	1.00	24.89	C
ATOM	1244	CD2	TRP	A	169	27.261	16.229	13.237	1.00	23.66	C
ATOM	1245	NE1	TRP	A	169	27.591	17.095	11.195	1.00	22.98	N
ATOM	1246	CE2	TRP	A	169	27.257	17.427	12.476	1.00	25.81	C
ATOM	1247	CE3	TRP	A	169	26.927	16.292	14.576	1.00	24.44	C
ATOM	1248	CZ2	TRP	A	169	26.933	18.680	13.018	1.00	26.96	C
ATOM	1249	CZ3	TRP	A	169	26.624	17.525	15.127	1.00	28.68	C
ATOM	1250	CH2	TRP	A	169	26.611	18.710	14.336	1.00	28.73	C
ATOM	1251	N	ILE	A	170	29.323	14.026	15.409	1.00	27.29	N
ATOM	1252	CA	ILE	A	170	29.725	14.985	16.406	1.00	28.36	C
ATOM	1253	C	ILE	A	170	31.252	14.874	16.686	1.00	29.15	C
ATOM	1254	O	ILE	A	170	31.920	15.875	16.866	1.00	29.81	O
ATOM	1255	CB	ILE	A	170	28.814	14.947	17.672	1.00	28.10	C
ATOM	1256	CG1	ILE	A	170	28.882	16.277	18.386	1.00	26.98	C
ATOM	1257	CG2	ILE	A	170	29.198	13.838	18.593	1.00	27.15	C
ATOM	1258	CD1	ILE	A	170	27.855	16.400	19.530	1.00	28.88	C
ATOM	1259	N	ASN	A	171	31.809	13.679	16.653	1.00	29.35	N
ATOM	1260	CA	ASN	A	171	33.261	13.535	16.843	1.00	30.18	C
ATOM	1261	C	ASN	A	171	34.060	14.259	15.752	1.00	30.67	C
ATOM	1262	O	ASN	A	171	35.117	14.823	16.036	1.00	31.32	O
ATOM	1263	CB	ASN	A	171	33.705	12.058	16.861	1.00	29.80	C
ATOM	1264	CG	ASN	A	171	33.210	11.274	18.094	1.00	30.17	C
ATOM	1265	OD1	ASN	A	171	32.682	11.821	19.051	1.00	30.65	O
ATOM	1266	ND2	ASN	A	171	33.372	9.968	18.036	1.00	31.44	N
ATOM	1267	N	LYS	A	172	33.591	14.231	14.509	1.00	30.94	N
ATOM	1268	CA	LYS	A	172	34.297	14.960	13.461	1.00	32.29	C
ATOM	1269	C	LYS	A	172	34.211	16.473	13.755	1.00	31.79	C
ATOM	1270	O	LYS	A	172	35.128	17.234	13.482	1.00	32.06	O
ATOM	1271	CB	LYS	A	172	33.754	14.646	12.055	1.00	32.47	C
ATOM	1272	CG	LYS	A	172	34.168	13.298	11.539	1.00	36.36	C
ATOM	1273	CD	LYS	A	172	33.697	13.012	10.072	1.00	41.05	C
ATOM	1274	CE	LYS	A	172	34.338	11.721	9.543	1.00	44.14	C
ATOM	1275	NZ	LYS	A	172	34.321	11.571	8.024	1.00	49.11	N
ATOM	1276	N	GLN	A	173	33.099	16.900	14.316	1.00	31.59	N
ATOM	1277	CA	GLN	A	173	32.931	18.299	14.616	1.00	31.80	C
ATOM	1278	C	GLN	A	173	33.965	18.680	15.681	1.00	32.04	C
ATOM	1279	O	GLN	A	173	34.670	19.687	15.534	1.00	32.67	O
ATOM	1280	CB	GLN	A	173	31.522	18.581	15.117	1.00	31.45	C
ATOM	1281	CG	GLN	A	173	30.477	18.685	14.067	1.00	31.68	C
ATOM	1282	CD	GLN	A	173	30.782	19.751	13.050	1.00	32.76	C
ATOM	1283	OE1	GLN	A	173	31.198	20.852	13.405	1.00	36.55	O
ATOM	1284	NE2	GLN	A	173	30.583	19.440	11.790	1.00	32.28	N
ATOM	1285	N	GLN	A	174	34.044	17.871	16.735	1.00	31.40	N
ATOM	1286	CA	GLN	A	174	34.999	18.074	17.811	1.00	31.28	C
ATOM	1287	C	GLN	A	174	36.437	18.098	17.244	1.00	30.94	C
ATOM	1288	O	GLN	A	174	37.253	18.939	17.602	1.00	30.50	O
ATOM	1289	CB	GLN	A	174	34.808	16.971	18.861	1.00	31.20	C
ATOM	1290	CG	GLN	A	174	35.859	16.917	19.935	1.00	31.64	C
ATOM	1291	CD	GLN	A	174	35.704	15.717	20.836	1.00	31.52	C
ATOM	1292	OE1	GLN	A	174	35.313	14.661	20.382	1.00	35.10	O
ATOM	1293	NE2	GLN	A	174	36.007	15.880	22.121	1.00	32.92	N
ATOM	1294	N	GLY	A	175	36.732	17.202	16.317	1.00	30.54	N
ATOM	1295	CA	GLY	A	175	38.048	17.169	15.721	1.00	30.38	C
ATOM	1296	C	GLY	A	175	38.288	18.339	14.783	1.00	31.21	C
ATOM	1297	O	GLY	A	175	39.339	18.974	14.812	1.00	31.31	O
ATOM	1298	N	LYS	A	176	37.317	18.661	13.946	1.00	31.67	N
ATOM	1299	CA	LYS	A	176	37.524	19.767	13.029	1.00	32.84	C
ATOM	1300	C	LYS	A	176	37.758	21.127	13.749	1.00	32.90	C
ATOM	1301	O	LYS	A	176	38.563	21.906	13.291	1.00	32.85	O

TOM	1302	CB	LYS	A	176	36.351	19.915	12.074	1.00	33.80	C
TOM	1303	CG	LYS	A	176	36.187	18.832	11.037	1.00	35.93	C
TOM	1304	CD	LYS	A	176	34.982	19.185	10.168	1.00	39.44	C
TOM	1305	CE	LYS	A	176	34.055	18.032	.9.961	1.00	40.94	C
TOM	1306	NZ	LYS	A	176	32.686	18.495	9.578	1.00	45.01	N
TOM	1307	N	ARG	A	177	37.074	21.398	14.859	1.00	32.98	N
TOM	1308	CA	ARG	A	177	37.242	22.677	15.571	1.00	33.61	C
TOM	1309	C	ARG	A	177	38.313	22.713	16.678	1.00	33.16	C
TOM	1310	O	ARG	A	177	38.453	23.717	17.370	1.00	33.01	O
TOM	1311	CB	ARG	A	177	35.920	23.101	16.220	1.00	33.86	C
TOM	1312	CG	ARG	A	177	34.716	22.947	15.353	1.00	35.87	C
TOM	1313	CD	ARG	A	177	34.728	23.721	14.062	1.00	37.56	C
TOM	1314	NE	ARG	A	177	33.704	23.135	13.222	1.00	42.96	N
TOM	1315	CZ	ARG	A	177	33.803	22.893	11.928	1.00	45.93	C
TOM	1316	NH1	ARG	A	177	34.897	23.218	11.247	1.00	46.65	N
TOM	1317	NH2	ARG	A	177	32.770	22.349	11.304	1.00	47.47	N
TOM	1318	N	GLY	A	178	39.038	21.624	16.887	1.00	32.79	N
TOM	1319	CA	GLY	A	178	40.068	21.629	17.907	1.00	31.78	C
TOM	1320	C	GLY	A	178	39.511	21.614	19.313	1.00	31.64	C
TOM	1321	O	GLY	A	178	40.251	21.782	20.292	1.00	33.25	O
TOM	1322	N	TRP	A	179	38.223	21.380	19.468	1.00	30.56	N
TOM	1323	CA	TRP	A	179	37.690	21.361	20.821	1.00	30.44	C
TOM	1324	C	TRP	A	179	38.328	20.385	21.789	1.00	30.36	C
TOM	1325	O	TRP	A	179	39.008	19.446	.21.416	1.00	29.60	O
TOM	1326	CB	TRP	A	179	36.200	21.115	20.806	1.00	30.43	C
TOM	1327	CG	TRP	A	179	35.426	22.183	20.136	1.00	29.86	C
TOM	1328	CD1	TRP	A	179	35.882	23.409	19.721	1.00	27.42	C
TOM	1329	CD2	TRP	A	179	34.054	22.115	19.769	1.00	29.51	C
TOM	1330	NE1	TRP	A	179	34.870	24.102	19.104	1.00	30.05	N
TOM	1331	CE2	TRP	A	179	33.728	23.338	19.130	1.00	30.70	C
TOM	1332	CE3	TRP	A	179	33.067	21.145	19.902	1.00	27.24	C
TOM	1333	CZ2	TRP	A	179	32.470	23.602	18.626	1.00	27.82	C
TOM	1334	CZ3	TRP	A	179	31.829	21.397	19.389	1.00	28.43	C
TOM	1335	CH2	TRP	A	179	31.532	22.630	18.759	1.00	29.15	C
TOM	1336	N	GLY	A	180	38.087	20.634	23.065	1.00	30.98	N
TOM	1337	CA	GLY	A	180	38.515	19.723	24.104	1.00	30.78	C
TOM	1338	C	GLY	A	180	37.468	18.637	24.246	1.00	31.74	C
TOM	1339	O	GLY	A	180	36.621	18.448	23.343	1.00	31.97	O
TOM	1340	N	GLN	A	181	37.498	17.941	25.378	1.00	32.16	N
TOM	1341	CA	GLN	A	181	36.628	16.798	25.608	1.00	33.12	C
TOM	1342	C	GLN	A	181	35.161	17.108	25.885	1.00	32.52	C
TOM	1343	O	GLN	A	181	34.813	18.181	26.348	1.00	32.55	O
TOM	1344	CB	GLN	A	181	37.161	15.962	26.773	1.00	33.24	C
TOM	1345	CG	GLN	A	181	36.780	16.496	28.155	1.00	37.52	C
TOM	1346	CD	GLN	A	181	37.066	15.488	29.282	1.00	42.63	C
TOM	1347	OE1	GLN	A	181	38.200	15.034	29.442	1.00	46.67	O
TOM	1348	NE2	GLN	A	181	36.037	15.131	30.043	1.00	45.13	N
TOM	1349	N	LEU	A	182	34.310	16.134	25.588	1.00	32.12	N
TOM	1350	CA	LEU	A	182	32.907	16.155	26.001	1.00	31.88	C
TOM	1351	C	LEU	A	182	32.928	16.114	27.528	1.00	30.66	C
TOM	1352	O	.LEU	A	182	33.481	15.190	28.087	1.00	30.31	O
TOM	1353	CB	LEU	A	182	32.228	14.880	25.512	1.00	31.80	C
TOM	1354	CG	LEU	A	182	30.715	14.723	25.454	1.00	33.59	C
TOM	1355	CD1	LEU	A	182	30.319	13.250	25.572	1.00	32.15	C
TOM	1356	CD2	LEU	A	182	30.059	15.454	26.520	1.00	36.60	C
TOM	1357	N	THR	A	183	32.373	17.112	28.207	1.00	29.62	N
TOM	1358	CA	THR	A	183	32.383	17.088	29.657	1.00	28.62	C
TOM	1359	C	THR	A	183	31.088	16.509	30.123	1.00	28.48	C
TOM	1360	O	THR	A	183	31.034	15.991	31.207	1.00	28.46	O
TOM	1361	CB	THR	A	183	32.504	18.509	30.276	1.00	28.82	C
TOM	1362	OG1	THR	A	183	31.441	19.364	29.795	1.00	28.93	O

ATOM	1363	CG2	THR	A	183	33.764	19.178	29.846	1.00	28.28	C
ATOM	1364	N	SER	A	184	30.005	16.673	29.355	1.00	28.14	N
ATOM	1365	CA	SER	A	184	28.734	16.144	29.805	1.00	28.16	C
ATOM	1366	C	SER	A	184	27.602	16.374	28.878	1.00	28.07	C
ATOM	1367	O	SER	A	184	27.703	17.120	27.931	1.00	29.72	O
ATOM	1368	CB	SER	A	184	28.357	16.750	31.149	1.00	27.81	C
ATOM	1369	OG	SER	A	184	28.166	18.132	31.017	1.00	30.35	O
ATOM	1370	N	ASN	A	185	26.505	15.721	29.176	1.00	27.93	N
ATOM	1371	CA	ASN	A	185	25.288	15.850	28.434	1.00	28.66	C
ATOM	1372	C	ASN	A	185	24.235	16.086	29.476	1.00	28.67	C
ATOM	1373	O	ASN	A	185	23.974	15.226	30.291	1.00	27.67	O
ATOM	1374	CB	ASN	A	185	24.927	14.543	27.683	1.00	28.53	C
ATOM	1375	CG	ASN	A	185	25.914	14.191	26.589	1.00	29.19	C
ATOM	1376	OD1	ASN	A	185	26.684	13.278	26.766	1.00	30.93	O
ATOM	1377	ND2	ASN	A	185	25.891	14.910	25.451	1.00	29.67	N
ATOM	1378	N	LEU	A	186	23.583	17.221	29.415	1.00	29.39	N
ATOM	1379	CA	LEU	A	186	22.557	17.526	30.388	1.00	30.47	C
ATOM	1380	C	LEU	A	186	21.179	17.177	29.835	1.00	30.85	C
ATOM	1381	O	LEU	A	186	20.796	17.566	28.714	1.00	30.64	O
ATOM	1382	CB	LEU	A	186	22.617	18.998	30.730	1.00	30.48	C
ATOM	1383	CG	LEU	A	186	21.779	19.484	31.917	1.00	32.51	C
ATOM	1384	CD1	LEU	A	186	22.330	18.952	33.238	1.00	31.55	C
ATOM	1385	CD2	LEU	A	186	21.678	21.072	31.954	1.00	29.96	C
ATOM	1386	N	LEU	A	187	20.409	16.439	30.613	1.00	31.21	N
ATOM	1387	CA	LEU	A	187	19.042	16.155	30.188	1.00	30.60	C
ATOM	1388	C	LEU	A	187	18.162	17.256	30.787	1.00	30.79	C
ATOM	1389	O	LEU	A	187	18.257	17.557	31.991	1.00	29.69	O
ATOM	1390	CB	LEU	A	187	18.626	14.781	30.644	1.00	30.50	C
ATOM	1391	CG	LEU	A	187	17.130	14.465	30.590	1.00	32.29	C
ATOM	1392	CD1	LEU	A	187	16.592	14.409	29.164	1.00	33.95	C
ATOM	1393	CD2	LEU	A	187	16.864	13.137	31.270	1.00	32.62	C
ATOM	1394	N	LEU	A	188	17.390	17.933	29.939	1.00	30.75	N
ATOM	1395	CA	LEU	A	188	16.513	18.973	30.426	1.00	31.42	C
ATOM	1396	C	LEU	A	188	15.053	18.646	30.107	1.00	32.02	C
ATOM	1397	O	LEU	A	188	14.676	18.481	28.941	1.00	31.44	O
ATOM	1398	CB	LEU	A	188	16.856	20.323	29.821	1.00	31.69	C
ATOM	1399	CG	LEU	A	188	18.253	20.823	30.131	1.00	32.24	C
ATOM	1400	CD1	LEU	A	188	19.094	20.883	28.904	1.00	32.79	C
ATOM	1401	CD2	LEU	A	188	18.121	22.200	30.658	1.00	32.69	C
ATOM	1402	N	ILE	A	189	14.228	18.568	31.146	1.00	32.26	N
ATOM	1403	CA	ILE	A	189	12.816	18.305	30.944	1.00	32.23	C
ATOM	1404	C	ILE	A	189	12.067	19.386	31.664	1.00	32.02	C
ATOM	1405	O	ILE	A	189	12.194	19.520	32.895	1.00	31.42	O
ATOM	1406	CB	ILE	A	189	12.427	16.966	31.479	1.00	32.05	C
ATOM	1407	CG1	ILE	A	189	13.256	15.894	30.793	1.00	33.02	C
ATOM	1408	CG2	ILE	A	189	10.957	16.764	31.232	1.00	32.90	C
ATOM	1409	CD1	ILE	A	189	13.006	14.466	31.277	1.00	34.20	C
ATOM	1410	N	GLY	A	190	11.279	20.145	30.898	1.00	31.94	N
ATOM	1411	CA	GLY	A	190	10.623	21.334	31.414	1.00	31.49	C
ATOM	1412	C	GLY	A	190	9.147	21.362	31.125	1.00	31.41	C
ATOM	1413	O	GLY	A	190	8.671	20.649	30.245	1.00	30.40	O
ATOM	1414	N	MET	A	191	8.433	22.154	31.914	1.00	31.55	N
ATOM	1415	CA	MET	A	191	7.027	22.378	31.697	1.00	32.41	C
ATOM	1416	C	MET	A	191	6.863	23.547	30.751	1.00	32.03	C
ATOM	1417	O	MET	A	191	7.722	24.435	30.658	1.00	32.29	O
ATOM	1418	CB	MET	A	191	6.313	22.672	33.008	1.00	33.21	C
ATOM	1419	CG	MET	A	191	6.294	21.499	33.957	1.00	35.09	C
ATOM	1420	SD	MET	A	191	5.828	21.953	35.652	1.00	39.51	S
ATOM	1421	CE	MET	A	191	4.213	22.512	35.350	1.00	39.52	C
ATOM	1422	N	GLU	A	192	5.755	23.539	30.033	1.00	31.96	N
ATOM	1423	CA	GLU	A	192	5.459	24.588	29.081	1.00	32.31	C

ATOM	1424	C	GLU A 192	5.511	25.919	29.776	1.00	31.73	C
ATOM	1425	O	GLU A 192	5.096	26.041	30.913	1.00	31.73	O
ATOM	1426	CB	GLU A 192	4.087	24.375	28.508	1.00	33.09	C
ATOM	1427	CG	GLU A 192	2.995	24.434	29.552	1.00	34.74	C
ATOM	1428	CD	GLU A 192	1.679	23.940	29.019	1.00	36.73	C
ATOM	1429	OE1	GLU A 192	1.630	23.515	27.832	1.00	37.30	O
ATOM	1430	OE2	GLU A 192	0.698	24.001	29.791	1.00	38.64	O
ATOM	1431	N	GLY A 193	6.049	26.926	29.103	1.00	31.79	N
ATOM	1432	CA	GLY A 193	6.201	28.242	29.714	1.00	30.87	C
ATOM	1433	C	GLY A 193	7.480	28.432	30.521	1.00	30.28	C
ATOM	1434	O	GLY A 193	7.777	29.534	30.901	1.00	30.29	O
ATOM	1435	N	ASN A 194	8.223	27.375	30.825	1.00	29.85	N
ATOM	1436	CA	ASN A 194	9.460	27.536	31.604	1.00	29.38	C
ATOM	1437	C	ASN A 194	10.473	28.371	30.840	1.00	28.61	C
ATOM	1438	O	ASN A 194	10.606	28.216	29.615	1.00	28.58	O
ATOM	1439	CB	ASN A 194	10.136	26.186	31.866	1.00	29.15	C
ATOM	1440	CG	ASN A 194	9.565	25.445	33.049	1.00	29.50	C
ATOM	1441	OD1	ASN A 194	8.632	25.896	33.714	1.00	32.61	O
ATOM	1442	ND2	ASN A 194	10.146	24.305	33.334	1.00	28.53	N
ATOM	1443	N	VAL A 195	11.221	29.194	31.561	1.00	27.70	N
ATOM	1444	CA	VAL A 195	12.272	29.998	30.962	1.00	27.80	C
ATOM	1445	C	VAL A 195	13.586	29.858	31.701	1.00	27.07	C
ATOM	1446	O	VAL A 195	13.636	29.898	32.939	1.00	27.43	O
ATOM	1447	CB	VAL A 195	11.904	31.520	31.018	1.00	28.18	C
ATOM	1448	CG1	VAL A 195	13.056	32.371	30.560	1.00	26.78	C
ATOM	1449	CG2	VAL A 195	10.662	31.789	30.187	1.00	29.06	C
ATOM	1450	N	THR A 196	14.659	29.712	30.953	1.00	26.48	N
ATOM	1451	CA	THR A 196	15.994	29.811	31.530	1.00	26.08	C
ATOM	1452	C	THR A 196	16.462	31.184	31.084	1.00	27.03	C
ATOM	1453	O	THR A 196	16.614	31.425	29.876	1.00	26.51	O
ATOM	1454	CB	THR A 196	16.915	28.811	30.934	1.00	25.96	C
ATOM	1455	OG1	THR A 196	16.525	27.478	31.309	1.00	26.20	O
ATOM	1456	CG2	THR A 196	18.340	29.012	31.457	1.00	23.99	C
ATOM	1457	N	PRO A 197	16.647	32.090	32.036	1.00	27.21	N
ATOM	1458	CA	PRO A 197	17.053	33.451	31.725	1.00	27.46	C
ATOM	1459	C	PRO A 197	18.432	33.512	31.113	1.00	27.48	C
ATOM	1460	O	PRO A 197	19.248	32.588	31.293	1.00	27.52	O
ATOM	1461	CB	PRO A 197	17.007	34.166	33.075	1.00	27.56	C
ATOM	1462	CG	PRO A 197	16.226	33.344	33.924	1.00	28.15	C
ATOM	1463	CD	PRO A 197	16.384	31.914	33.470	1.00	27.92	C
ATOM	1464	N	ALA A 198	18.668	34.616	30.413	1.00	26.77	N
ATOM	1465	CA	ALA A 198	19.877	34.830	29.647	1.00	26.92	C
ATOM	1466	C	ALA A 198	21.172	34.681	30.438	1.00	27.14	C
ATOM	1467	O	ALA A 198	21.354	35.278	31.520	1.00	25.53	O
ATOM	1468	CB	ALA A 198	19.828	36.235	29.021	1.00	27.07	C
ATOM	1469	N	HIS A 199	22.091	33.929	29.839	1.00	27.28	N
ATOM	1470	CA	HIS A 199	23.399	33.673	30.424	1.00	27.81	C
ATOM	1471	C	HIS A 199	24.319	33.208	29.333	1.00	28.09	C
ATOM	1472	O	HIS A 199	23.857	32.933	28.197	1.00	28.34	O
ATOM	1473	CB	HIS A 199	23.323	32.549	31.461	1.00	27.10	C
ATOM	1474	CG	HIS A 199	22.963	31.221	30.864	1.00	29.70	C
ATOM	1475	ND1	HIS A 199	21.668	30.891	30.525	1.00	30.01	N
ATOM	1476	CD2	HIS A 199	23.728	30.180	30.463	1.00	29.60	C
ATOM	1477	CE1	HIS A 199	21.647	29.684	29.993	1.00	29.66	C
ATOM	1478	NE2	HIS A 199	22.881	29.236	29.926	1.00	30.43	N
ATOM	1479	N	TYR A 200	25.612	33.104	29.671	1.00	28.30	N
ATOM	1480	CA	TYR A 200	26.607	32.518	28.769	1.00	28.15	C
ATOM	1481	C	TYR A 200	27.298	31.351	29.482	1.00	27.91	C
ATOM	1482	O	TYR A 200	27.335	31.333	30.690	1.00	27.87	O
ATOM	1483	CB	TYR A 200	27.585	33.534	28.217	1.00	28.02	C
ATOM	1484	CG	TYR A 200	28.540	34.142	29.226	1.00	29.58	C

ATOM	1485	CD1	TYR	A	200	29.784	33.571	29.462	1.00	28.14	C
ATOM	1486	CD2	TYR	A	200	28.231	35.342	29.871	1.00	29.32	C
ATOM	1487	CE1	TYR	A	200	30.660	34.128	30.367	1.00	30.20	C
ATOM	1488	CE2	TYR	A	200	29.107	35.919	30.777	1.00	29.61	C
ATOM	1489	CZ	TYR	A	200	30.319	35.315	31.031	1.00	29.78	C
ATOM	1490	OH	TYR	A	200	31.180	35.864	31.940	1.00	24.43	O
ATOM	1491	N	ASP	A	201	27.797	30.363	28.727	1.00	27.73	N
ATOM	1492	CA	ASP	A	201	28.461	29.180	29.302	1.00	27.65	C
ATOM	1493	C	ASP	A	201	29.873	29.220	28.799	1.00	27.87	C
ATOM	1494	O	ASP	A	201	30.080	29.765	27.768	1.00	27.68	O
ATOM	1495	CB	ASP	A	201	27.775	27.884	28.855	1.00	26.32	C
ATOM	1496	CG	ASP	A	201	26.356	27.768	29.363	1.00	25.12	C
ATOM	1497	OD1	ASP	A	201	26.156	27.722	30.605	1.00	23.49	O
ATOM	1498	OD2	ASP	A	201	25.360	27.687	28.589	1.00	27.18	O
ATOM	1499	N	GLU	A	202	30.843	28.682	29.520	1.00	29.28	N
ATOM	1500	CA	GLU	A	202	32.228	28.672	29.013	1.00	31.18	C
ATOM	1501	C	GLU	A	202	32.571	27.435	28.190	1.00	31.54	C
ATOM	1502	O	GLU	A	202	33.734	27.060	28.139	1.00	33.48	O
ATOM	1503	CB	GLU	A	202	33.250	28.741	30.155	1.00	30.78	C
ATOM	1504	CG	GLU	A	202	33.122	29.981	31.003	1.00	33.61	C
ATOM	1505	CD	GLU	A	202	34.194	30.081	32.062	1.00	35.96	C
ATOM	1506	OE1	GLU	A	202	34.036	29.531	33.166	1.00	41.25	O
ATOM	1507	OE2	GLU	A	202	35.199	30.718	31.788	1.00	39.13	O
ATOM	1508	N	GLN	A	203	31.582	26.747	27.641	1.00	31.19	N
ATOM	1509	CA	GLN	A	203	31.844	25.589	26.833	1.00	30.78	C
ATOM	1510	C	GLN	A	203	31.078	25.743	25.556	1.00	29.96	C
ATOM	1511	O	GLN	A	203	30.213	26.581	25.462	1.00	30.22	O
ATOM	1512	CB	GLN	A	203	31.427	24.315	27.546	1.00	31.32	C
ATOM	1513	CG	GLN	A	203	32.364	23.971	28.725	1.00	34.97	C
ATOM	1514	CD	GLN	A	203	32.204	22.548	29.288	1.00	35.23	C
ATOM	1515	OE1	GLN	A	203	32.161	21.559	28.551	1.00	36.82	O
ATOM	1516	NE2	GLN	A	203	32.160	22.456	30.600	1.00	35.56	N
ATOM	1517	N	GLN	A	204	31.461	24.961	24.555	1.00	29.46	N
ATOM	1518	CA	GLN	A	204	30.791	24.911	23.292	1.00	28.65	C
ATOM	1519	C	GLN	A	204	29.641	23.941	23.494	1.00	28.27	C
ATOM	1520	O	GLN	A	204	29.797	22.941	24.194	1.00	27.65	O
ATOM	1521	CB	GLN	A	204	31.717	24.381	22.214	1.00	29.02	C
ATOM	1522	CG	GLN	A	204	33.006	25.154	22.028	1.00	28.50	C
ATOM	1523	CD	GLN	A	204	32.818	26.366	21.150	1.00	27.16	C
ATOM	1524	OE1	GLN	A	204	31.690	26.742	20.846	1.00	22.90	O
ATOM	1525	NE2	GLN	A	204	33.921	26.952	20.714	1.00	23.20	N
ATOM	1526	N	ASN	A	205	28.497	24.219	22.864	1.00	27.36	N
ATOM	1527	CA	ASN	A	205	27.302	23.424	23.058	1.00	27.13	C
ATOM	1528	C	ASN	A	205	26.552	23.052	21.777	1.00	27.39	C
ATOM	1529	O	ASN	A	205	26.151	23.930	20.999	1.00	27.36	O
ATOM	1530	CB	ASN	A	205	26.378	24.229	23.967	1.00	26.95	C
ATOM	1531	CG	ASN	A	205	25.083	23.525	24.327	1.00	27.30	C
ATOM	1532	OD1	ASN	A	205	24.726	22.453	23.818	1.00	27.11	O
ATOM	1533	ND2	ASN	A	205	24.319	24.190	25.171	1.00	24.64	N
ATOM	1534	N	PHE	A	206	26.383	21.749	21.542	1.00	26.46	N
ATOM	1535	CA	PHE	A	206	25.417	21.334	20.554	1.00	25.88	C
ATOM	1536	C	PHE	A	206	24.181	20.946	21.373	1.00	25.65	C
ATOM	1537	O	PHE	A	206	24.230	19.988	22.178	1.00	25.16	O
ATOM	1538	CB	PHE	A	206	25.909	20.170	19.717	1.00	26.28	C
ATOM	1539	CG	PHE	A	206	26.837	20.566	18.636	1.00	24.81	C
ATOM	1540	CD1	PHE	A	206	26.416	21.374	17.633	1.00	26.27	C
ATOM	1541	CD2	PHE	A	206	28.122	20.098	18.616	1.00	25.53	C
ATOM	1542	CE1	PHE	A	206	27.248	21.736	16.634	1.00	27.05	C
ATOM	1543	CE2	PHE	A	206	28.991	20.469	17.617	1.00	26.80	C
ATOM	1544	CZ	PHE	A	206	28.549	21.274	16.619	1.00	28.34	C
ATOM	1545	N	PHE	A	207	23.084	21.648	21.086	1.00	25.08	N

ATOM	1546	CA	PHE A 207	21.809	21.625	21.827	1.00	25.52	C
ATOM	1547	C	PHE A 207	20.775	20.885	21.011	1.00	25.55	C
ATOM	1548	O	PHE A 207	20.261	21.410	20.058	1.00	25.61	O
ATOM	1549	CB	PHE A 207	21.408	23.107	22.074	1.00	25.37	C
ATOM	1550	CG	PHE A 207	20.146	23.346	22.872	1.00	23.70	C
ATOM	1551	CD1	PHE A 207	18.938	23.547	22.234	1.00	24.08	C
ATOM	1552	CD2	PHE A 207	20.199	23.551	24.220	1.00	25.24	C
ATOM	1553	CE1	PHE A 207	17.800	23.864	22.927	1.00	24.50	C
ATOM	1554	CE2	PHE A 207	19.035	23.883	24.959	1.00	26.04	C
ATOM	1555	CZ	PHE A 207	17.836	24.021	24.298	1.00	26.68	C
ATOM	1556	N	ALA A 208	20.490	19.657	21.422	1.00	26.60	N
ATOM	1557	CA	ALA A 208	19.667	18.710	20.689	1.00	26.45	C
ATOM	1558	C	ALA A 208	18.231	18.594	21.210	1.00	27.10	C
ATOM	1559	O	ALA A 208	17.966	17.987	22.273	1.00	26.47	O
ATOM	1560	CB	ALA A 208	20.303	17.363	20.766	1.00	25.67	C
ATOM	1561	N	GLN A 209	17.306	19.121	20.419	1.00	27.02	N
ATOM	1562	CA	GLN A 209	15.918	19.125	20.833	1.00	27.37	C
ATOM	1563	C	GLN A 209	15.276	17.781	20.519	1.00	27.55	C
ATOM	1564	O	GLN A 209	15.489	17.190	19.427	1.00	26.51	O
ATOM	1565	CB	GLN A 209	15.195	20.301	20.179	1.00	27.15	C
ATOM	1566	CG	GLN A 209	13.806	20.508	20.662	1.00	27.77	C
ATOM	1567	CD	GLN A 209	13.740	20.959	22.126	1.00	29.40	C
ATOM	1568	OE1	GLN A 209	14.773	21.166	22.774	1.00	27.27	O
ATOM	1569	NE2	GLN A 209	12.517	21.118	22.636	1.00	27.15	N
ATOM	1570	N	ILE A 210	14.461	17.327	21.473	1.00	28.32	N
ATOM	1571	CA	ILE A 210	13.897	15.998	21.429	1.00	29.37	C
ATOM	1572	C	ILE A 210	12.403	15.966	21.435	1.00	30.37	C
ATOM	1573	O	ILE A 210	11.849	15.275	20.619	1.00	31.58	O
ATOM	1574	CB	ILE A 210	14.413	15.204	22.605	1.00	29.80	C
ATOM	1575	CG1	ILE A 210	15.830	14.734	22.302	1.00	30.27	C
ATOM	1576	CG2	ILE A 210	13.525	14.005	22.864	1.00	30.25	C
ATOM	1577	CD1	ILE A 210	16.624	14.421	23.516	1.00	32.28	C
ATOM	1578	N	LYS A 211	11.757	16.664	22.374	1.00	31.18	N
ATOM	1579	CA	LYS A 211	10.300	16.723	22.438	1.00	31.16	C
ATOM	1580	C	LYS A 211	9.887	18.137	22.706	1.00	31.19	C
ATOM	1581	O	LYS A 211	10.495	18.800	23.523	1.00	31.21	O
ATOM	1582	CB	LYS A 211	9.767	15.891	23.591	1.00	32.00	C
ATOM	1583	CG	LYS A 211	8.240	15.758	23.629	1.00	32.36	C
ATOM	1584	CD	LYS A 211	7.787	15.177	24.970	1.00	33.23	C
ATOM	1585	CE	LYS A 211	6.497	14.368	24.883	1.00	35.14	C
ATOM	1586	NZ	LYS A 211	5.506	14.755	23.835	1.00	35.43	N
ATOM	1587	N	GLY A 212	8.844	18.592	22.018	1.00	31.20	N
ATOM	1588	CA	GLY A 212	8.337	19.934	22.174	1.00	30.96	C
ATOM	1589	C	GLY A 212	9.209	20.975	21.495	1.00	31.42	C
ATOM	1590	O	GLY A 212	10.167	20.670	20.771	1.00	31.06	O
ATOM	1591	N	TYR A 213	8.857	22.224	21.734	1.00	31.43	N
ATOM	1592	CA	TYR A 213	9.507	23.319	21.057	1.00	31.80	C
ATOM	1593	C	TYR A 213	10.046	24.332	22.043	1.00	31.00	C
ATOM	1594	O	TYR A 213	9.411	24.649	23.038	1.00	29.31	O
ATOM	1595	CB	TYR A 213	8.502	23.959	20.127	1.00	32.64	C
ATOM	1596	CG	TYR A 213	8.103	23.039	19.015	1.00	35.60	C
ATOM	1597	CD1	TYR A 213	7.089	22.071	19.174	1.00	38.37	C
ATOM	1598	CD2	TYR A 213	8.758	23.110	17.813	1.00	37.73	C
ATOM	1599	CE1	TYR A 213	6.765	21.223	18.137	1.00	39.37	C
ATOM	1600	CE2	TYR A 213	8.443	22.292	16.792	1.00	39.75	C
ATOM	1601	CZ	TYR A 213	7.460	21.364	16.924	1.00	41.66	C
ATOM	1602	OH	TYR A 213	7.232	20.603	15.782	1.00	46.53	O
ATOM	1603	N	LYS A 214	11.260	24.787	21.777	1.00	30.99	N
ATOM	1604	CA	LYS A 214	11.886	25.804	22.594	1.00	31.15	C
ATOM	1605	C	LYS A 214	12.305	26.993	21.762	1.00	31.00	C
ATOM	1606	O	LYS A 214	12.914	26.838	20.695	1.00	31.84	O

ATOM	1607	CB	LYS A 214	13.112	25.244	23.311	1.00	31.08	C
ATOM	1608	CG	LYS A 214	12.806	24.432	24.557	1.00	30.96	C
ATOM	1609	CD	LYS A 214	14.106	23.949	25.159	1.00	30.84	C
ATOM	1610	CE	LYS A 214	13.982	23.555	26.584	1.00	29.59	C
ATOM	1611	NZ	LYS A 214	15.278	23.118	27.162	1.00	28.16	N
ATOM	1612	N	ARG A 215	11.992	28.193	22.241	1.00	30.59	N
ATOM	1613	CA	ARG A 215	12.445	29.385	21.549	1.00	29.98	C
ATOM	1614	C	ARG A 215	13.764	29.790	22.154	1.00	29.65	C
ATOM	1615	O	ARG A 215	13.850	29.982	23.349	1.00	29.61	O
ATOM	1616	CB	ARG A 215	11.431	30.502	21.690	1.00	30.08	C
ATOM	1617	CG	ARG A 215	11.835	31.810	21.004	1.00	29.82	C
ATOM	1618	CD	ARG A 215	11.221	32.960	21.731	1.00	32.78	C
ATOM	1619	NE	ARG A 215	11.211	34.189	20.975	1.00	33.81	N
ATOM	1620	CZ	ARG A 215	10.540	35.259	21.336	1.00	35.12	C
ATOM	1621	NH1	ARG A 215	9.828	35.262	22.441	1.00	35.28	N
ATOM	1622	NH2	ARG A 215	10.586	36.338	20.581	1.00	39.28	N
ATOM	1623	N	CYS A 216	14.791	29.909	21.327	1.00	29.86	N
ATOM	1624	CA	CYS A 216	16.129	30.237	21.797	1.00	29.64	C
ATOM	1625	C	CYS A 216	16.533	31.603	21.274	1.00	30.06	C
ATOM	1626	O	CYS A 216	16.516	31.807	20.092	1.00	31.32	O
ATOM	1627	CB	CYS A 216	17.113	29.183	21.275	1.00	29.78	C
ATOM	1628	SG	CYS A 216	16.658	27.438	21.641	1.00	30.35	S
ATOM	1629	N	ILE A 217	16.849	32.556	22.149	1.00	30.28	N
ATOM	1630	CA	ILE A 217	17.303	33.876	21.744	1.00	29.78	C
ATOM	1631	C	ILE A 217	18.758	34.017	22.203	1.00	29.42	C
ATOM	1632	O	ILE A 217	19.050	33.852	23.385	1.00	28.77	O
ATOM	1633	CB	ILE A 217	16.427	34.969	22.391	1.00	30.51	C
ATOM	1634	CG1	ILE A 217	14.934	34.705	22.111	1.00	31.29	C
ATOM	1635	CG2	ILE A 217	16.785	36.313	21.843	1.00	30.11	C
ATOM	1636	CD1	ILE A 217	14.009	35.655	22.847	1.00	33.08	C
ATOM	1637	N	LEU A 218	19.647	34.326	21.257	1.00	28.60	N
ATOM	1638	CA	LEU A 218	21.059	34.392	21.501	1.00	28.59	C
ATOM	1639	C	LEU A 218	21.606	35.781	21.257	1.00	28.74	C
ATOM	1640	O	LEU A 218	21.102	36.522	20.412	1.00	29.64	O
ATOM	1641	CB	LEU A 218	21.788	33.422	20.574	1.00	28.52	C
ATOM	1642	CG	LEU A 218	21.927	31.980	21.028	1.00	28.46	C
ATOM	1643	CD1	LEU A 218	20.569	31.318	21.233	1.00	28.95	C
ATOM	1644	CD2	LEU A 218	22.707	31.196	20.026	1.00	27.94	C
ATOM	1645	N	PHE A 219	22.659	36.145	21.986	1.00	28.61	N
ATOM	1646	CA	PHE A 219	23.309	37.458	21.774	1.00	28.07	C
ATOM	1647	C	PHE A 219	24.811	37.221	21.710	1.00	28.25	C
ATOM	1648	O	PHE A 219	25.352	36.468	22.517	1.00	28.82	O
ATOM	1649	CB	PHE A 219	22.987	38.415	22.908	1.00	26.73	C
ATOM	1650	CG	PHE A 219	21.522	38.553	23.199	1.00	27.28	C
ATOM	1651	CD1	PHE A 219	20.874	37.658	24.029	1.00	25.73	C
ATOM	1652	CD2	PHE A 219	20.782	39.598	22.648	1.00	28.57	C
ATOM	1653	CE1	PHE A 219	19.536	37.811	24.311	1.00	26.59	C
ATOM	1654	CE2	PHE A 219	19.443	39.722	22.898	1.00	27.78	C
ATOM	1655	CZ	PHE A 219	18.816	38.828	23.725	1.00	28.22	C
ATOM	1656	N	PRO A 220	25.501	37.840	20.776	1.00	28.30	N
ATOM	1657	CA	PRO A 220	26.946	37.641	20.675	1.00	28.76	C
ATOM	1658	C	PRO A 220	27.688	38.195	21.881	1.00	29.07	C
ATOM	1659	O	PRO A 220	27.172	39.019	22.661	1.00	29.11	O
ATOM	1660	CB	PRO A 220	27.336	38.413	19.426	1.00	28.79	C
ATOM	1661	CG	PRO A 220	26.016	38.847	18.795	1.00	29.65	C
ATOM	1662	CD	PRO A 220	24.987	38.794	19.790	1.00	28.85	C
ATOM	1663	N	PRO A 221	28.914	37.727	22.057	1.00	29.09	N
ATOM	1664	CA	PRO A 221	29.725	38.147	23.188	1.00	28.85	C
ATOM	1665	C	PRO A 221	29.979	39.656	23.199	1.00	28.60	C
ATOM	1666	O	PRO A 221	30.223	40.182	24.270	1.00	26.85	O
ATOM	1667	CB	PRO A 221	31.018	37.412	22.975	1.00	29.01	C

ATOM	1668	CG	PRO	A	221	30.665	36.286	22.114	1.00	30.46	C
ATOM	1669	CD	PRO	A	221	29.580	36.722	21.232	1.00	29.52	C
ATOM	1670	N	ASP	A	222	29.853	40.335	22.062	1.00	28.17	N
ATOM	1671	CA	ASP	A	222	30.155	41.763	22.044	1.00	28.79	C
ATOM	1672	C	ASP	A	222	28.976	42.554	22.533	1.00	28.84	C
ATOM	1673	O	ASP	A	222	28.948	43.767	22.432	1.00	30.46	O
ATOM	1674	CB	ASP	A	222	30.631	42.287	20.693	1.00	27.27	C
ATOM	1675	CG	ASP	A	222	29.541	42.288	19.655	1.00	30.76	C
ATOM	1676	OD1	ASP	A	222	28.368	41.926	19.920	1.00	30.56	O
ATOM	1677	OD2	ASP	A	222	29.785	42.609	18.495	1.00	39.36	O
ATOM	1678	N	GLN	A	223	28.000	41.885	23.083	1.00	29.33	N
ATOM	1679	CA	GLN	A	223	26.902	42.614	23.676	1.00	29.61	C
ATOM	1680	C	GLN	A	223	27.012	42.533	25.194	1.00	28.97	C
ATOM	1681	O	GLN	A	223	26.065	42.825	25.919	1.00	29.82	O
ATOM	1682	CB	GLN	A	223	25.575	42.131	23.110	1.00	30.22	C
ATOM	1683	CG	GLN	A	223	25.244	42.854	21.762	1.00	33.01	C
ATOM	1684	CD	GLN	A	223	23.866	42.562	21.241	1.00	37.71	C
ATOM	1685	OE1	GLN	A	223	22.899	42.573	22.005	1.00	43.11	O
ATOM	1686	NE2	GLN	A	223	23.760	42.285	19.943	1.00	38.91	N
ATOM	1687	N	PHE	A	224	28.181	42.148	25.672	1.00	27.69	N
ATOM	1688	CA	PHE	A	224	28.452	42.168	27.115	1.00	28.30	C
ATOM	1689	C	PHE	A	224	27.932	43.497	27.771	1.00	29.27	C
ATOM	1690	O	PHE	A	224	27.248	43.448	28.786	1.00	29.24	O
ATOM	1691	CB	PHE	A	224	29.968	42.025	27.373	1.00	26.64	C
ATOM	1692	CG	PHE	A	224	30.338	41.881	28.810	1.00	27.05	C
ATOM	1693	CD1	PHE	A	224	30.526	42.992	29.619	1.00	26.91	C
ATOM	1694	CD2	PHE	A	224	30.560	40.649	29.365	1.00	25.77	C
ATOM	1695	CE1	PHE	A	224	30.878	42.864	30.930	1.00	24.95	C
ATOM	1696	CE2	PHE	A	224	30.928	40.522	30.675	1.00	25.92	C
ATOM	1697	CZ	PHE	A	224	31.056	41.641	31.467	1.00	27.45	C
ATOM	1698	N	GLU	A	225	28.253	44.658	27.177	1.00	30.23	N
ATOM	1699	CA	GLU	A	225	27.873	45.951	27.753	1.00	31.35	C
ATOM	1700	C	GLU	A	225	26.362	46.120	27.909	1.00	30.48	C
ATOM	1701	O	GLU	A	225	25.925	46.920	28.738	1.00	28.49	O
ATOM	1702	CB	GLU	A	225	28.401	47.130	26.927	1.00	32.35	C
ATOM	1703	CG	GLU	A	225	29.894	47.356	27.083	1.00	37.72	C
ATOM	1704	CD	GLU	A	225	30.327	48.801	27.406	1.00	45.22	C
ATOM	1705	OE1	GLU	A	225	29.848	49.472	28.389	1.00	44.87	O
ATOM	1706	OE2	GLU	A	225	31.230	49.248	26.665	1.00	54.04	O
ATOM	1707	N	CYS	A	226	25.579	45.375	27.116	1.00	29.44	N
ATOM	1708	CA	CYS	A	226	24.132	45.532	27.155	1.00	28.60	C
ATOM	1709	C	CYS	A	226	23.429	44.524	28.056	1.00	28.86	C
ATOM	1710	O	CYS	A	226	22.236	44.716	28.352	1.00	27.16	O
ATOM	1711	CB	CYS	A	226	23.541	45.373	25.767	1.00	29.07	C
ATOM	1712	SG	CYS	A	226	24.193	46.391	24.441	1.00	29.66	S
ATOM	1713	N	LEU	A	227	24.133	43.455	28.483	1.00	28.37	N
ATOM	1714	CA	LEU	A	227	23.469	42.390	29.242	1.00	28.53	C
ATOM	1715	C	LEU	A	227	23.760	42.287	30.737	1.00	27.80	C
ATOM	1716	O	LEU	A	227	23.117	41.540	31.465	1.00	26.98	O
ATOM	1717	CB	LEU	A	227	23.701	41.062	28.531	1.00	28.86	C
ATOM	1718	CG	LEU	A	227	22.853	41.135	27.246	1.00	30.66	C
ATOM	1719	CD1	LEU	A	227	23.335	40.152	26.186	1.00	32.05	C
ATOM	1720	CD2	LEU	A	227	21.389	40.812	27.590	1.00	30.73	C
ATOM	1721	N	TYR	A	228	24.760	43.016	31.170	1.00	28.05	N
ATOM	1722	CA	TYR	A	228	25.034	43.219	32.596	1.00	28.59	C
ATOM	1723	C	TYR	A	228	25.051	41.978	33.504	1.00	29.27	C
ATOM	1724	O	TYR	A	228	24.253	41.863	34.483	1.00	29.59	O
ATOM	1725	CB	TYR	A	228	24.026	44.213	33.157	1.00	28.04	C
ATOM	1726	CG	TYR	A	228	24.019	45.556	32.464	1.00	28.00	C
ATOM	1727	CD1	TYR	A	228	24.839	46.584	32.881	1.00	27.54	C
ATOM	1728	CD2	TYR	A	228	23.177	45.799	31.389	1.00	28.83	C

ATOM	1729	CE1	TYR	A	228	24.826	47.828	32.248	1.00	27.44	C
ATOM	1730	CE2	TYR	A	228	23.160	47.018	30.745	1.00	27.63	C
ATOM	1731	CZ	TYR	A	228	23.964	48.040	31.186	1.00	29.01	C
ATOM	1732	OH	TYR	A	228	23.924	49.260	30.536	1.00	28.98	O
ATOM	1733	N	PRO	A	229	26.009	41.101	33.261	1.00	28.11	N
ATOM	1734	CA	PRO	A	229	26.146	39.900	34.082	1.00	28.54	C
ATOM	1735	C	PRO	A	229	26.424	40.223	35.534	1.00	27.88	C
ATOM	1736	O	PRO	A	229	27.085	41.212	35.786	1.00	28.01	O
ATOM	1737	CB	PRO	A	229	27.396	39.214	33.494	1.00	28.67	C
ATOM	1738	CG	PRO	A	229	28.116	40.314	32.802	1.00	28.96	C
ATOM	1739	CD	PRO	A	229	27.046	41.191	32.231	1.00	28.25	C
ATOM	1740	N	TYR	A	230	25.981	39.372	36.453	1.00	26.80	N
ATOM	1741	CA	TYR	A	230	26.296	39.542	37.840	1.00	25.91	C
ATOM	1742	C	TYR	A	230	27.838	39.508	38.028	1.00	25.72	C
ATOM	1743	O	TYR	A	230	28.582	39.094	37.167	1.00	25.79	O
ATOM	1744	CB	TYR	A	230	25.673	38.431	38.677	1.00	25.13	C
ATOM	1745	CG	TYR	A	230	24.193	38.523	38.900	1.00	24.95	C
ATOM	1746	CD1	TYR	A	230	23.289	38.036	37.933	1.00	24.25	C
ATOM	1747	CD2	TYR	A	230	23.675	39.063	40.090	1.00	25.16	C
ATOM	1748	CE1	TYR	A	230	21.944	38.105	38.139	1.00	24.40	C
ATOM	1749	CE2	TYR	A	230	22.311	39.114	40.320	1.00	23.86	C
ATOM	1750	CZ	TYR	A	230	21.464	38.647	39.336	1.00	26.74	C
ATOM	1751	OH	TYR	A	230	20.122	38.713	39.501	1.00	34.04	O
ATOM	1752	N	PRO	A	231	28.309	39.966	39.167	1.00	25.05	N
ATOM	1753	CA	PRO	A	231	29.711	39.806	39.517	1.00	24.73	C
ATOM	1754	C	PRO	A	231	30.151	38.318	39.500	1.00	24.94	C
ATOM	1755	O	PRO	A	231	29.359	37.410	39.817	1.00	24.30	O
ATOM	1756	CB	PRO	A	231	29.760	40.353	40.957	1.00	25.28	C
ATOM	1757	CG	PRO	A	231	28.613	41.331	41.016	1.00	25.28	C
ATOM	1758	CD	PRO	A	231	27.535	40.687	40.198	1.00	24.73	C
ATOM	1759	N	VAL	A	232	31.419	38.086	39.173	1.00	23.75	N
ATOM	1760	CA	VAL	A	232	31.898	36.766	39.055	1.00	24.45	C
ATOM	1761	C	VAL	A	232	31.725	35.935	40.351	1.00	24.83	C
ATOM	1762	O	VAL	A	232	31.402	34.754	40.263	1.00	24.83	O
ATOM	1763	CB	VAL	A	232	33.375	36.761	38.582	1.00	25.13	C
ATOM	1764	CG1	VAL	A	232	33.974	35.405	38.828	1.00	23.91	C
ATOM	1765	CG2	VAL	A	232	33.481	37.091	37.092	1.00	23.86	C
ATOM	1766	N	HIS	A	233	31.886	36.540	41.525	1.00	25.24	N
ATOM	1767	CA	HIS	A	233	31.766	35.806	42.790	1.00	26.43	C
ATOM	1768	C	HIS	A	233	30.321	35.656	43.304	1.00	26.47	C
ATOM	1769	O	HIS	A	233	30.052	34.986	44.289	1.00	26.08	O
ATOM	1770	CB	HIS	A	233	32.617	36.475	43.855	1.00	26.65	C
ATOM	1771	CG	HIS	A	233	34.078	36.428	43.564	1.00	28.51	C
ATOM	1772	ND1	HIS	A	233	34.764	37.493	43.013	1.00	30.95	N
ATOM	1773	CD2	HIS	A	233	34.987	35.435	43.730	1.00	29.75	C
ATOM	1774	CE1	HIS	A	233	36.043	37.169	42.888	1.00	31.18	C
ATOM	1775	NE2	HIS	A	233	36.201	35.919	43.302	1.00	32.10	N
ATOM	1776	N	HIS	A	234	29.391	36.283	42.626	1.00	26.94	N
ATOM	1777	CA	HIS	A	234	27.999	36.141	42.983	1.00	27.89	C
ATOM	1778	C	HIS	A	234	27.456	34.838	42.411	1.00	27.85	C
ATOM	1779	O	HIS	A	234	27.871	34.403	41.384	1.00	27.14	O
ATOM	1780	CB	HIS	A	234	27.219	37.258	42.372	1.00	28.20	C
ATOM	1781	CG	HIS	A	234	25.782	37.279	42.748	1.00	27.95	C
ATOM	1782	ND1	HIS	A	234	24.840	36.514	42.092	1.00	30.05	N
ATOM	1783	CD2	HIS	A	234	25.105	38.057	43.624	1.00	26.43	C
ATOM	1784	CE1	HIS	A	234	23.644	36.789	42.588	1.00	29.87	C
ATOM	1785	NE2	HIS	A	234	23.781	37.714	43.524	1.00	27.85	N
ATOM	1786	N	PRO	A	235	26.561	34.197	43.130	1.00	28.44	N
ATOM	1787	CA	PRO	A	235	26.018	32.929	42.678	1.00	28.87	C
ATOM	1788	C	PRO	A	235	25.431	32.956	41.294	1.00	28.34	C
ATOM	1789	O	PRO	A	235	25.387	31.884	40.716	1.00	28.04	O

ATOM	1790	CB	PRO	A	235	24.931	32.636	43.713	1.00 29.59	C
ATOM	1791	CG	PRO	A	235	25.473	33.290	44.975	1.00 29.10	C
ATOM	1792	CD	PRO	A	235	26.059	34.571	44.466	1.00 28.17	C
ATOM	1793	N	CYS	A	236	25.021	34.112	40.770	1.00 27.29	N
ATOM	1794	CA	CYS	A	236	24.447	34.135	39.455	1.00 26.15	C
ATOM	1795	C	CYS	A	236	25.478	34.602	38.451	1.00 25.39	C
ATOM	1796	O	CYS	A	236	25.140	35.102	37.361	1.00 26.21	O
ATOM	1797	CB	CYS	A	236	23.158	34.923	39.436	1.00 26.36	C
ATOM	1798	SG	CYS	A	236	21.908	34.207	40.555	1.00 29.77	S
ATOM	1799	N	ASP	A	237	26.746	34.411	38.803	1.00 24.07	N
ATOM	1800	CA	ASP	A	237	27.830	34.528	37.855	1.00 24.53	C
ATOM	1801	C	ASP	A	237	27.441	33.977	36.467	1.00 24.31	C
ATOM	1802	O	ASP	A	237	26.966	32.865	36.344	1.00 23.00	O
ATOM	1803	CB	ASP	A	237	29.018	33.769	38.353	1.00 24.42	C
ATOM	1804	CG	ASP	A	237	30.233	33.850	37.414	1.00 28.30	C
ATOM	1805	OD1	ASP	A	237	30.433	34.877	36.673	1.00 29.51	O
ATOM	1806	OD2	ASP	A	237	31.071	32.900	37.386	1.00 29.51	O
ATOM	1807	N	ARG	A	238	27.633	34.803	35.445	1.00 24.85	N
ATOM	1808	CA	ARG	A	238	27.388	34.434	34.041	1.00 26.59	C
ATOM	1809	C	ARG	A	238	25.921	34.663	33.595	1.00 25.95	C
ATOM	1810	O	ARG	A	238	25.647	34.628	32.426	1.00 26.55	O
ATOM	1811	CB	ARG	A	238	27.834	32.994	33.737	1.00 26.57	C
ATOM	1812	CG	ARG	A	238	29.311	32.758	33.891	1.00 27.77	C
ATOM	1813	CD	ARG	A	238	29.727	31.360	33.399	1.00 28.78	C
ATOM	1814	NE	ARG	A	238	29.142	30.434	34.337	1.00 33.68	N
ATOM	1815	CZ	ARG	A	238	28.046	29.736	34.140	1.00 36.98	C
ATOM	1816	NH1	ARG	A	238	27.383	29.782	32.980	1.00 38.06	N
ATOM	1817	NH2	ARG	A	238	27.609	28.987	35.129	1.00 37.87	N
ATOM	1818	N	GLN	A	239	25.012	34.933	34.516	1.00 25.97	N
ATOM	1819	CA	GLN	A	239	23.634	35.245	34.152	1.00 26.05	C
ATOM	1820	C	GLN	A	239	23.478	36.776	34.037	1.00 26.67	C
ATOM	1821	O	GLN	A	239	24.196	37.531	34.699	1.00 27.33	O
ATOM	1822	CB	GLN	A	239	22.663	34.724	35.201	1.00 25.55	C
ATOM	1823	CG	GLN	A	239	23.027	33.417	35.843	1.00 27.73	C
ATOM	1824	CD	GLN	A	239	23.246	32.282	34.859	1.00 31.42	C
ATOM	1825	OE1	GLN	A	239	22.332	31.881	34.133	1.00 34.43	O
ATOM	1826	NE2	GLN	A	239	24.457	31.761	34.835	1.00 31.35	N
ATOM	1827	N	SER	A	240	22.569	37.233	33.185	1.00 26.94	N
ATOM	1828	CA	SER	A	240	22.293	38.653	33.034	1.00 26.93	C
ATOM	1829	C	SER	A	240	21.490	39.118	34.229	1.00 26.78	C
ATOM	1830	O	SER	A	240	20.642	38.389	34.703	1.00 27.00	O
ATOM	1831	CB	SER	A	240	21.414	38.891	31.818	1.00 26.95	C
ATOM	1832	OG	SER	A	240	20.916	40.234	31.804	1.00 27.75	O
ATOM	1833	N	GLN	A	241	21.733	40.331	34.696	1.00 26.90	N
ATOM	1834	CA	GLN	A	241	20.963	40.903	35.816	1.00 27.25	C
ATOM	1835	C	GLN	A	241	19.632	41.520	35.311	1.00 27.84	C
ATOM	1836	O	GLN	A	241	18.763	41.866	36.104	1.00 27.28	O
ATOM	1837	CB	GLN	A	241	21.734	42.009	36.546	1.00 26.21	C
ATOM	1838	CG	GLN	A	241	22.971	41.636	37.344	1.00 26.53	C
ATOM	1839	CD	GLN	A	241	23.740	42.877	37.817	1.00 26.65	C
ATOM	1840	OE1	GLN	A	241	23.436	43.425	38.859	1.00 31.02	O
ATOM	1841	NE2	GLN	A	241	24.714	43.318	37.048	1.00 28.00	N
ATOM	1842	N	VAL	A	242	19.464	41.657	34.004	1.00 28.19	N
ATOM	1843	CA	VAL	A	242	18.284	42.335	33.552	1.00 28.55	C
ATOM	1844	C	VAL	A	242	17.117	41.409	33.563	1.00 28.88	C
ATOM	1845	O	VAL	A	242	17.198	40.314	33.053	1.00 28.92	O
ATOM	1846	CB	VAL	A	242	18.422	42.770	32.093	1.00 29.31	C
ATOM	1847	CG1	VAL	A	242	17.165	43.549	31.647	1.00 27.90	C
ATOM	1848	CG2	VAL	A	242	19.711	43.530	31.866	1.00 28.67	C
ATOM	1849	N	ASP	A	243	16.009	41.862	34.113	1.00 28.55	N
ATOM	1850	CA	ASP	A	243	14.766	41.103	34.052	1.00 27.62	C

ATOM	1851	C	ASP	A	243	14.121	41.396	32.709	1.00	27.45	C
ATOM	1852	O	ASP	A	243	13.579	42.480	32.452	1.00	25.90	O
ATOM	1853	CB	ASP	A	243	13.876	41.560	35.193	1.00	27.99	C
ATOM	1854	CG	ASP	A	243	12.509	40.945	35.177	1.00	29.40	C
ATOM	1855	OD1	ASP	A	243	12.096	40.291	34.179	1.00	31.46	O
ATOM	1856	OD2	ASP	A	243	11.747	41.110	36.161	1.00	32.65	O
ATOM	1857	N	PHE	A	244	14.180	40.419	31.825	1.00	28.27	N
ATOM	1858	CA	PHE	A	244	13.656	40.603	30.496	1.00	28.92	C
ATOM	1859	C	PHE	A	244	12.172	40.975	30.481	1.00	30.32	C
ATOM	1860	O	PHE	A	244	11.728	41.643	29.561	1.00	31.01	O
ATOM	1861	CB	PHE	A	244	13.900	39.369	29.657	1.00	29.32	C
ATOM	1862	CG	PHE	A	244	15.255	39.298	29.053	1.00	28.51	C
ATOM	1863	CD1	PHE	A	244	16.397	39.628	29.775	1.00	31.29	C
ATOM	1864	CD2	PHE	A	244	15.399	38.853	27.793	1.00	28.23	C
ATOM	1865	CE1	PHE	A	244	17.649	39.535	29.196	1.00	29.39	C
ATOM	1866	CE2	PHE	A	244	16.654	38.736	27.229	1.00	30.79	C
ATOM	1867	CZ	PHE	A	244	17.759	39.107	27.919	1.00	29.44	C
ATOM	1868	N	ASP	A	245	11.401	40.551	31.482	1.00	31.22	N
ATOM	1869	CA	ASP	A	245	10.007	40.913	31.544	1.00	31.40	C
ATOM	1870	C	ASP	A	245	9.770	42.349	32.032	1.00	31.91	C
ATOM	1871	O	ASP	A	245	8.704	42.891	31.786	1.00	30.40	O
ATOM	1872	CB	ASP	A	245	9.263	39.968	32.467	1.00	32.57	C
ATOM	1873	CG	ASP	A	245	9.292	38.546	31.988	1.00	33.29	C
ATOM	1874	OD1	ASP	A	245	9.289	38.333	30.768	1.00	35.51	O
ATOM	1875	OD2	ASP	A	245	9.348	37.577	32.764	1.00	35.50	O
ATOM	1876	N	ASN	A	246	10.735	42.954	32.731	1.00	32.07	N
ATOM	1877	CA	ASN	A	246	10.562	44.310	33.244	1.00	33.10	C
ATOM	1878	C	ASN	A	246	11.884	45.016	33.384	1.00	32.49	C
ATOM	1879	O	ASN	A	246	12.400	45.179	34.476	1.00	33.20	O
ATOM	1880	CB	ASN	A	246	9.873	44.296	34.603	1.00	33.31	C
ATOM	1881	CG	ASN	A	246	9.555	45.716	35.110	1.00	39.27	C
ATOM	1882	OD1	ASN	A	246	9.331	46.678	34.313	1.00	43.28	O
ATOM	1883	ND2	ASN	A	246	9.551	45.867	36.445	1.00	44.32	N
ATOM	1884	N	PRO	A	247	12.472	45.374	32.265	1.00	31.66	N
ATOM	1885	CA	PRO	A	247	13.822	45.936	32.263	1.00	31.26	C
ATOM	1886	C	PRO	A	247	13.924	47.298	32.933	1.00	31.58	C
ATOM	1887	O	PRO	A	247	13.185	48.211	32.629	1.00	31.85	O
ATOM	1888	CB	PRO	A	247	14.161	46.082	30.782	1.00	31.22	C
ATOM	1889	CG	PRO	A	247	13.017	45.510	30.022	1.00	31.05	C
ATOM	1890	CD	PRO	A	247	11.894	45.216	30.928	1.00	31.01	C
ATOM	1891	N	ASP	A	248	14.893	47.422	33.815	1.00	31.35	N
ATOM	1892	CA	ASP	A	248	15.161	48.643	34.467	1.00	31.48	C
ATOM	1893	C	ASP	A	248	16.222	49.413	33.650	1.00	31.23	C
ATOM	1894	O	ASP	A	248	17.422	49.217	33.784	1.00	30.76	O
ATOM	1895	CB	ASP	A	248	15.646	48.310	35.850	1.00	31.60	C
ATOM	1896	CG	ASP	A	248	15.745	49.504	36.720	1.00	33.62	C
ATOM	1897	OD1	ASP	A	248	16.020	50.619	36.201	1.00	34.39	O
ATOM	1898	OD2	ASP	A	248	15.578	49.395	37.949	1.00	38.39	O
ATOM	1899	N	TYR	A	249	15.764	50.285	32.783	1.00	31.95	N
ATOM	1900	CA	TYR	A	249	16.676	51.053	31.942	1.00	32.80	C
ATOM	1901	C	TYR	A	249	17.534	52.052	32.714	1.00	33.92	C
ATOM	1902	O	TYR	A	249	18.558	52.490	32.203	1.00	34.33	O
ATOM	1903	CB	TYR	A	249	15.906	51.732	30.825	1.00	32.56	C
ATOM	1904	CG	TYR	A	249	15.183	50.751	29.928	1.00	31.41	C
ATOM	1905	CD1	TYR	A	249	15.859	49.695	29.316	1.00	30.27	C
ATOM	1906	CD2	TYR	A	249	13.845	50.868	29.704	1.00	29.24	C
ATOM	1907	CE1	TYR	A	249	15.205	48.814	28.478	1.00	29.30	C
ATOM	1908	CE2	TYR	A	249	13.178	49.968	28.894	1.00	29.24	C
ATOM	1909	CZ	TYR	A	249	13.858	48.947	28.285	1.00	29.20	C
ATOM	1910	OH	TYR	A	249	13.173	48.078	27.452	1.00	29.69	O
ATOM	1911	N	GLU	A	250	17.155	52.369	33.952	1.00	34.69	N

ATOM	1912	CA	GLU A 250	17.994	53.202	34.789	1.00	35.66	C
ATOM	1913	C	GLU A 250	19.249	52.494	35.235	1.00	34.69	C
ATOM	1914	O	GLU A 250	20.313	53.077	35.207	1.00	34.29	O
ATOM	1915	CB	GLU A 250	17.252	53.685	36.021	1.00	36.82	C
ATOM	1916	CG	GLU A 250	16.115	54.609	35.650	1.00	41.99	C
ATOM	1917	CD	GLU A 250	15.554	55.360	36.827	1.00	48.02	C
ATOM	1918	OE1	GLU A 250	16.114	55.275	37.949	1.00	53.95	O
ATOM	1919	OE2	GLU A 250	14.543	56.043	36.614	1.00	52.47	O
ATOM	1920	N	ARG A 251	19.139	51.254	35.691	1.00	33.87	N
ATOM	1921	CA	ARG A 251	20.335	50.550	36.088	1.00	33.26	C
ATOM	1922	C	ARG A 251	21.013	49.992	34.873	1.00	32.36	C
ATOM	1923	O	ARG A 251	22.210	49.914	34.849	1.00	32.79	O
ATOM	1924	CB	ARG A 251	20.040	49.425	37.066	1.00	34.36	C
ATOM	1925	CG	ARG A 251	19.476	49.895	38.425	1.00	36.13	C
ATOM	1926	CD	ARG A 251	18.966	48.771	39.339	1.00	39.31	C
ATOM	1927	NE	ARG A 251	20.052	47.860	39.733	1.00	42.09	N
ATOM	1928	CZ	ARG A 251	19.890	46.563	39.964	1.00	41.90	C
ATOM	1929	NH1	ARG A 251	18.696	46.006	39.843	1.00	41.62	N
ATOM	1930	NH2	ARG A 251	20.932	45.815	40.296	1.00	41.98	N
ATOM	1931	N	PHE A 252	20.272	49.654	33.825	1.00	31.66	N
ATOM	1932	CA	PHE A 252	20.879	48.977	32.677	1.00	30.28	C
ATOM	1933	C	PHE A 252	20.528	49.651	31.347	1.00	29.72	C
ATOM	1934	O	PHE A 252	19.882	49.096	30.483	1.00	29.84	O
ATOM	1935	CB	PHE A 252	20.420	47.531	32.675	1.00	29.99	C
ATOM	1936	CG	PHE A 252	20.405	46.864	34.050	1.00	29.63	C
ATOM	1937	CD1	PHE A 252	21.562	46.717	34.796	1.00	29.74	C
ATOM	1938	CD2	PHE A 252	19.238	46.317	34.554	1.00	31.30	C
ATOM	1939	CE1	PHE A 252	21.546	46.067	36.039	1.00	30.44	C
ATOM	1940	CE2	PHE A 252	19.199	45.668	35.805	1.00	31.42	C
ATOM	1941	CZ	PHE A 252	20.356	45.551	36.550	1.00	32.04	C
ATOM	1942	N	PRO A 253	21.034	50.844	31.155	1.00	29.72	N
ATOM	1943	CA	PRO A 253	20.607	51.662	30.022	1.00	28.89	C
ATOM	1944	C	PRO A 253	20.953	50.996	28.689	1.00	29.46	C
ATOM	1945	O	PRO A 253	20.166	51.061	27.722	1.00	28.81	O
ATOM	1946	CB	PRO A 253	21.361	52.975	30.240	1.00	28.37	C
ATOM	1947	CG	PRO A 253	22.543	52.614	31.155	1.00	27.97	C
ATOM	1948	CD	PRO A 253	22.136	51.463	31.942	1.00	29.24	C
ATOM	1949	N	ASN A 254	22.093	50.323	28.590	1.00	29.37	N
ATOM	1950	CA	ASN A 254	22.401	49.742	27.274	1.00	28.85	C
ATOM	1951	C	ASN A 254	21.547	48.529	26.902	1.00	28.28	C
ATOM	1952	O	ASN A 254	21.663	47.970	25.794	1.00	27.47	O
ATOM	1953	CB	ASN A 254	23.874	49.407	27.122	1.00	28.84	C
ATOM	1954	CG	ASN A 254	24.745	50.654	26.996	1.00	29.96	C
ATOM	1955	OD1	ASN A 254	25.622	50.882	27.834	1.00	31.21	O
ATOM	1956	ND2	ASN A 254	24.531	51.443	25.931	1.00	29.17	N
ATOM	1957	N	PHE A 255	20.687	48.091	27.797	1.00	27.30	N
ATOM	1958	CA	PHE A 255	19.801	47.006	27.368	1.00	27.53	C
ATOM	1959	C	PHE A 255	18.844	47.512	26.283	1.00	26.80	C
ATOM	1960	O	PHE A 255	18.193	46.750	25.603	1.00	27.22	O
ATOM	1961	CB	PHE A 255	19.015	46.448	28.538	1.00	27.48	C
ATOM	1962	CG	PHE A 255	18.282	45.250	28.198	1.00	26.63	C
ATOM	1963	CD1	PHE A 255	18.950	44.073	27.998	1.00	29.74	C
ATOM	1964	CD2	PHE A 255	16.935	45.288	28.039	1.00	26.29	C
ATOM	1965	CE1	PHE A 255	18.273	42.947	27.681	1.00	29.50	C
ATOM	1966	CE2	PHE A 255	16.261	44.192	27.692	1.00	26.21	C
ATOM	1967	CZ	PHE A 255	16.917	43.012	27.518	1.00	30.10	C
ATOM	1968	N	GLN A 256	18.776	48.818	26.125	1.00	26.57	N
ATOM	1969	CA	GLN A 256	17.918	49.429	25.137	1.00	26.55	C
ATOM	1970	C	GLN A 256	18.522	49.253	23.745	1.00	26.46	C
ATOM	1971	O	GLN A 256	17.881	49.560	22.771	1.00	24.39	O
ATOM	1972	CB	GLN A 256	17.756	50.933	25.423	1.00	26.18	C

ATOM	1973	CG	GLN A 256	16.656	51.226	26.406	1.00	28.72	C
ATOM	1974	CD	GLN A 256	16.721	52.636	27.028	1.00	29.64	C
ATOM	1975	OE1	GLN A 256	15.737	53.358	27.005	1.00	32.56	O
ATOM	1976	NE2	GLN A 256	17.861	52.999	27.590	1.00	26.88	N
ATOM	1977	N	ASN A 257	19.774	48.809	23.694	1.00	27.86	N
ATOM	1978	CA	ASN A 257	20.509	48.611	22.452	1.00	29.22	C
ATOM	1979	C	ASN A 257	20.733	47.143	22.116	1.00	30.46	C
ATOM	1980	O	ASN A 257	21.399	46.855	21.132	1.00	32.28	O
ATOM	1981	CB	ASN A 257	21.897	49.232	22.510	1.00	28.50	C
ATOM	1982	CG	ASN A 257	21.878	50.666	22.890	1.00	29.30	C
ATOM	1983	OD1	ASN A 257	22.329	51.025	23.989	1.00	27.33	O
ATOM	1984	ND2	ASN A 257	21.382	51.523	21.982	1.00	25.68	N
ATOM	1985	N	VAL A 258	20.200	46.213	22.900	1.00	31.51	N
ATOM	1986	CA	VAL A 258	20.432	44.791	22.623	1.00	32.54	C
ATOM	1987	C	VAL A 258	19.674	44.295	21.386	1.00	32.39	O
ATOM	1988	O	VAL A 258	18.543	44.766	21.081	1.00	32.29	C
ATOM	1989	CB	VAL A 258	20.050	43.937	23.841	1.00	33.12	C
ATOM	1990	CG1	VAL A 258	18.546	43.818	23.986	1.00	32.40	C
ATOM	1991	CG2	VAL A 258	20.646	42.566	23.686	1.00	36.78	N
ATOM	1992	N	VAL A 259	20.302	43.386	20.654	1.00	32.45	C
ATOM	1993	CA	VAL A 259	19.682	42.796	19.448	1.00	32.96	C
ATOM	1994	C	VAL A 259	19.943	41.301	19.391	1.00	33.08	O
ATOM	1995	O	VAL A 259	21.074	40.878	19.351	1.00	33.50	C
ATOM	1996	CB	VAL A 259	20.269	43.401	18.172	1.00	33.19	C
ATOM	1997	CG1	VAL A 259	19.625	42.771	16.962	1.00	34.73	C
ATOM	1998	CG2	VAL A 259	20.054	44.901	18.143	1.00	32.25	N
ATOM	1999	N	GLY A 260	18.902	40.491	19.406	1.00	33.70	C
ATOM	2000	CA	GLY A 260	19.091	39.052	19.368	1.00	34.16	C
ATOM	2001	C	GLY A 260	19.036	38.327	18.014	1.00	33.92	O
ATOM	2002	O	GLY A 260	18.655	38.891	16.975	1.00	33.59	N
ATOM	2003	N	TYR A 261	19.469	37.071	18.052	1.00	33.14	C
ATOM	2004	CA	TYR A 261	19.375	36.157	16.938	1.00	33.55	C
ATOM	2005	C	TYR A 261	18.439	35.095	17.489	1.00	33.41	O
ATOM	2006	O	TYR A 261	18.700	34.542	18.561	1.00	33.67	C
ATOM	2007	CB	TYR A 261	20.715	35.508	16.657	1.00	33.81	C
ATOM	2008	CG	TYR A 261	21.758	36.416	16.061	1.00	36.80	C
ATOM	2009	CD1	TYR A 261	21.886	36.545	14.694	1.00	42.37	C
ATOM	2010	CD2	TYR A 261	22.602	37.139	16.851	1.00	38.31	C
ATOM	2011	CE1	TYR A 261	22.823	37.378	14.139	1.00	43.02	C
ATOM	2012	CE2	TYR A 261	23.556	37.938	16.312	1.00	40.85	C
ATOM	2013	CZ	TYR A 261	23.660	38.058	14.955	1.00	42.50	O
ATOM	2014	OH	TYR A 261	24.617	38.865	14.414	1.00	45.43	N
ATOM	2015	N	GLU A 262	17.322	34.832	16.834	1.00	32.71	C
ATOM	2016	CA	GLU A 262	16.394	33.886	17.438	1.00	32.21	C
ATOM	2017	C	GLU A 262	15.975	32.768	16.508	1.00	30.89	O
ATOM	2018	O	GLU A 262	16.180	32.819	15.294	1.00	30.63	C
ATOM	2019	CB	GLU A 262	15.196	34.613	18.049	1.00	32.16	C
ATOM	2020	CG	GLU A 262	13.968	34.753	17.210	1.00	30.84	C
ATOM	2021	CD	GLU A 262	12.818	35.380	17.992	1.00	31.21	O
ATOM	2022	OE1	GLU A 262	12.761	36.612	18.108	1.00	34.58	O
ATOM	2023	OE2	GLU A 262	11.962	34.663	18.504	1.00	29.56	N
ATOM	2024	N	THR A 263	15.447	31.746	17.133	1.00	28.97	C
ATOM	2025	CA	THR A 263	14.941	30.587	16.447	1.00	28.44	C
ATOM	2026	C	THR A 263	14.080	29.743	17.387	1.00	27.24	O
ATOM	2027	O	THR A 263	14.088	29.893	18.620	1.00	26.43	C
ATOM	2028	CB	THR A 263	16.093	29.746	15.902	1.00	28.50	O
ATOM	2029	OG1	THR A 263	15.592	28.798	14.964	1.00	27.18	C
ATOM	2030	CG2	THR A 263	16.697	28.854	16.975	1.00	28.63	N
ATOM	2031	N	VAL A 264	13.306	28.887	16.776	1.00	27.22	C
ATOM	2032	CA	VAL A 264	12.509	27.942	17.497	1.00	28.49	C
ATOM	2033	C	VAL A 264	12.925	26.576	17.022	1.00	29.10	C

ATOM	2034	O	VAL A 264	12.876	26.279	15.828	1.00	28.47	O
ATOM	2035	CB	VAL A 264	11.025	28.126	17.252	1.00	29.23	C
ATOM	2036	CG1	VAL A 264	10.259	26.871	17.767	1.00	29.07	C
ATOM	2037	CG2	VAL A 264	10.520	29.431	17.973	1.00	28.52	C
ATOM	2038	N	VAL A 265	13.401	25.763	17.954	1.00	29.56	N
ATOM	2039	CA	VAL A 265	13.806	24.413	17.594	1.00	29.83	C
ATOM	2040	C	VAL A 265	12.785	23.404	18.039	1.00	29.63	C
ATOM	2041	O	VAL A 265	12.188	23.544	19.105	1.00	29.93	O
ATOM	2042	CB	VAL A 265	15.197	24.015	18.203	1.00	29.88	C
ATOM	2043	CG1	VAL A 265	16.281	24.883	17.589	1.00	32.24	C
ATOM	2044	CG2	VAL A 265	15.234	24.114	19.712	1.00	26.80	C
ATOM	2045	N	GLY A 266	12.642	22.371	17.226	1.00	28.96	N
ATOM	2046	CA	GLY A 266	11.770	21.268	17.513	1.00	28.86	C
ATOM	2047	C	GLY A 266	12.463	19.909	17.428	1.00	28.32	C
ATOM	2048	O	GLY A 266	13.656	19.804	17.215	1.00	28.58	O
ATOM	2049	N	PRO A 267	11.696	18.852	17.581	1.00	28.06	N
ATOM	2050	CA	PRO A 267	12.278	17.505	17.565	1.00	28.37	C
ATOM	2051	C	PRO A 267	13.148	17.313	16.360	1.00	28.01	C
ATOM	2052	O	PRO A 267	12.674	17.573	15.265	1.00	28.36	O
ATOM	2053	CB	PRO A 267	11.047	16.582	17.482	1.00	27.55	C
ATOM	2054	CG	PRO A 267	10.000	17.278	18.220	1.00	28.05	C
ATOM	2055	CD	PRO A 267	10.237	18.817	17.827	1.00	28.28	C
ATOM	2056	N	GLY A 268	14.392	16.878	16.562	1.00	27.37	N
ATOM	2057	CA	GLY A 268	15.273	16.605	15.453	1.00	25.78	C
ATOM	2058	C	GLY A 268	16.231	17.726	15.175	1.00	25.51	C
ATOM	2059	O	GLY A 268	17.237	17.508	14.519	1.00	26.07	O
ATOM	2060	N	ASP A 269	15.957	18.928	15.653	1.00	25.79	N
ATOM	2061	CA	ASP A 269	16.835	20.044	15.354	1.00	25.78	C
ATOM	2062	C	ASP A 269	17.996	20.091	16.377	1.00	26.28	C
ATOM	2063	O	ASP A 269	17.848	19.689	17.549	1.00	26.27	O
ATOM	2064	CB	ASP A 269	16.106	21.376	15.504	1.00	26.89	C
ATOM	2065	CG	ASP A 269	14.898	21.583	14.603	1.00	25.99	C
ATOM	2066	OD1	ASP A 269	14.745	20.966	13.562	1.00	28.50	O
ATOM	2067	OD2	ASP A 269	14.065	22.495	14.853	1.00	29.93	O
ATOM	2068	N	VAL A 270	19.128	20.632	15.937	1.00	26.28	N
ATOM	2069	CA	VAL A 270	20.291	20.847	16.775	1.00	26.03	C
ATOM	2070	C	VAL A 270	20.780	22.271	16.628	1.00	26.03	C
ATOM	2071	O	VAL A 270	21.123	22.727	15.547	1.00	25.72	O
ATOM	2072	CB	VAL A 270	21.414	19.938	16.381	1.00	25.76	C
ATOM	2073	CG1	VAL A 270	22.675	20.325	17.113	1.00	26.27	C
ATOM	2074	CG2	VAL A 270	21.060	18.546	16.735	1.00	25.93	C
ATOM	2075	N	LEU A 271	20.809	22.987	17.730	1.00	26.47	N
ATOM	2076	CA	LEU A 271	21.257	24.364	17.713	1.00	26.42	C
ATOM	2077	C	LEU A 271	22.673	24.422	18.228	1.00	27.12	C
ATOM	2078	O	LEU A 271	22.973	23.936	19.310	1.00	26.82	O
ATOM	2079	CB	LEU A 271	20.372	25.235	18.570	1.00	26.20	C
ATOM	2080	CG	LEU A 271	20.935	26.646	18.783	1.00	27.91	C
ATOM	2081	CD1	LEU A 271	20.962	27.396	17.500	1.00	27.86	C
ATOM	2082	CD2	LEU A 271	20.100	27.425	19.789	1.00	29.16	C
ATOM	2083	N	TYR A 272	23.563	24.980	17.423	1.00	27.82	N
ATOM	2084	CA	TYR A 272	24.913	25.201	17.873	1.00	27.79	C
ATOM	2085	C	TYR A 272	24.918	26.494	18.662	1.00	26.67	C
ATOM	2086	O	TYR A 272	24.660	27.528	18.117	1.00	27.22	O
ATOM	2087	CB	TYR A 272	25.898	25.325	16.693	1.00	27.26	C
ATOM	2088	CG	TYR A 272	27.296	25.785	17.124	1.00	28.18	C
ATOM	2089	CD1	TYR A 272	27.924	25.237	18.221	1.00	28.32	C
ATOM	2090	CD2	TYR A 272	27.973	26.784	16.435	1.00	29.06	C
ATOM	2091	CE1	TYR A 272	29.169	25.653	18.600	1.00	28.29	C
ATOM	2092	CE2	TYR A 272	29.232	27.188	16.805	1.00	27.19	C
ATOM	2093	CZ	TYR A 272	29.821	26.632	17.903	1.00	27.41	C
ATOM	2094	OH	TYR A 272	31.081	27.026	18.322	1.00	24.66	O

ATOM	2095	N	ILE A 273	25.237	26.418	19.934	1.00	26.87	N
ATOM	2096	CA	ILE A 273	25.381	27.591	20.810	1.00	26.89	C
ATOM	2097	C	ILE A 273	26.841	27.751	21.182	1.00	27.37	C
ATOM	2098	O	ILE A 273	27.359	27.049	22.056	1.00	27.62	O
ATOM	2099	CB	ILE A 273	24.647	27.422	22.085	1.00	26.74	C
ATOM	2100	CG1	ILE A 273	23.182	27.185	21.799	1.00	25.89	C
ATOM	2101	CG2	ILE A 273	24.852	28.675	22.941	1.00	26.79	C
ATOM	2102	CD1	ILE A 273	22.338	27.108	23.065	1.00	25.37	C
ATOM	2103	N	PRO A 274	27.491	28.681	20.515	1.00	27.39	N
ATOM	2104	CA	PRO A 274	28.923	28.871	20.601	1.00	27.76	C
ATOM	2105	C	PRO A 274	29.287	29.415	21.934	1.00	27.42	C
ATOM	2106	O	PRO A 274	28.483	30.135	22.518	1.00	26.71	O
ATOM	2107	CB	PRO A 274	29.250	29.840	19.426	1.00	27.60	C
ATOM	2108	CG	PRO A 274	27.980	30.107	18.741	1.00	28.16	C
ATOM	2109	CD	PRO A 274	26.876	29.504	19.497	1.00	28.21	C
ATOM	2110	N	MET A 275	30.467	29.017	22.394	1.00	27.88	N
ATOM	2111	CA	MET A 275	30.979	29.346	23.717	1.00	28.91	C
ATOM	2112	C	MET A 275	30.974	30.849	23.919	1.00	28.27	C
ATOM	2113	O	MET A 275	31.284	31.589	23.000	1.00	27.69	O
ATOM	2114	CB	MET A 275	32.365	28.808	23.869	1.00	29.00	C
ATOM	2115	CG	MET A 275	32.861	28.842	25.313	1.00	34.03	C
ATOM	2116	SD	MET A 275	34.499	28.084	25.455	1.00	39.22	S
ATOM	2117	CE	MET A 275	35.200	28.479	23.871	1.00	36.40	C
ATOM	2118	N	TYR A 276	30.531	31.294	25.086	1.00	27.79	N
ATOM	2119	CA	TYR A 276	30.472	32.746	25.389	1.00	29.16	C
ATOM	2120	C	TYR A 276	29.267	33.465	24.802	1.00	27.80	C
ATOM	2121	O	TYR A 276	29.076	34.609	25.107	1.00	28.35	O
ATOM	2122	CB	TYR A 276	31.779	33.506	24.974	1.00	29.63	C
ATOM	2123	CG	TYR A 276	32.918	33.207	25.897	1.00	34.37	C
ATOM	2124	CD1	TYR A 276	32.966	33.783	27.146	1.00	38.52	C
ATOM	2125	CD2	TYR A 276	33.934	32.306	25.547	1.00	39.45	C
ATOM	2126	CE1	TYR A 276	33.955	33.493	28.022	1.00	39.83	C
ATOM	2127	CE2	TYR A 276	34.965	32.015	26.449	1.00	42.05	C
ATOM	2128	CZ	TYR A 276	34.954	32.609	27.685	1.00	42.46	C
ATOM	2129	OH	TYR A 276	35.949	32.343	28.624	1.00	48.60	O
ATOM	2130	N	TRP A 277	28.468	32.830	23.951	1.00	27.45	N
ATOM	2131	CA	TRP A 277	27.271	33.485	23.419	1.00	26.19	C
ATOM	2132	C	TRP A 277	26.160	33.442	24.424	1.00	25.93	C
ATOM	2133	O	TRP A 277	25.882	32.409	24.973	1.00	26.84	O
ATOM	2134	CB	TRP A 277	26.796	32.826	22.130	1.00	26.07	C
ATOM	2135	CG	TRP A 277	27.525	33.276	20.957	1.00	24.33	C
ATOM	2136	CD1	TRP A 277	28.862	33.118	20.731	1.00	24.81	C
ATOM	2137	CD2	TRP A 277	26.995	33.935	19.821	1.00	23.88	C
ATOM	2138	NE1	TRP A 277	29.204	33.674	19.531	1.00	24.86	N
ATOM	2139	CE2	TRP A 277	28.073	34.182	18.944	1.00	24.16	C
ATOM	2140	CE3	TRP A 277	25.727	34.398	19.464	1.00	25.16	C
ATOM	2141	CZ2	TRP A 277	27.923	34.858	17.747	1.00	23.53	C
ATOM	2142	CZ3	TRP A 277	25.579	35.064	18.250	1.00	25.92	C
ATOM	2143	CH2	TRP A 277	26.679	35.292	17.414	1.00	24.81	C
ATOM	2144	N	TRP A 278	25.516	34.566	24.673	1.00	26.34	N
ATOM	2145	CA	TRP A 278	24.408	34.623	25.625	1.00	26.96	C
ATOM	2146	C	TRP A 278	23.229	33.847	25.050	1.00	27.33	C
ATOM	2147	O	TRP A 278	23.021	33.846	23.847	1.00	27.18	O
ATOM	2148	CB	TRP A 278	23.952	36.062	25.838	1.00	26.87	C
ATOM	2149	CG	TRP A 278	24.965	36.916	26.455	1.00	27.61	C
ATOM	2150	CD1	TRP A 278	25.997	37.558	25.833	1.00	28.27	C
ATOM	2151	CD2	TRP A 278	25.065	37.228	27.830	1.00	25.52	C
ATOM	2152	NE1	TRP A 278	26.731	38.261	26.753	1.00	28.77	N
ATOM	2153	CE2	TRP A 278	26.164	38.072	27.991	1.00	29.02	C
ATOM	2154	CE3	TRP A 278	24.303	36.915	28.942	1.00	26.86	C
ATOM	2155	CZ2	TRP A 278	26.541	38.563	29.224	1.00	28.96	C

ATOM	2156	CZ3	TRP	A	278	24.676	37.402	30.157	1.00	29.86	C
ATOM	2157	CH2	TRP	A	278	25.780	38.224	30.293	1.00	27.89	C
ATOM	2158	N	HIS	A	279	22.455	33.193	25.890	1.00	27.47	N
ATOM	2159	CA	HIS	A	279	21.263	32.554	25.380	1.00	28.50	C
ATOM	2160	C	HIS	A	279	20.158	32.574	26.403	1.00	28.09	C
ATOM	2161	O	HIS	A	279	20.420	32.445	27.584	1.00	29.26	O
ATOM	2162	CB	HIS	A	279	21.528	31.112	24.899	1.00	28.46	C
ATOM	2163	CG	HIS	A	279	22.339	30.278	25.838	1.00	30.29	C
ATOM	2164	ND1	HIS	A	279	23.712	30.381	25.928	1.00	31.17	N
ATOM	2165	CD2	HIS	A	279	21.984	29.270	26.673	1.00	31.89	C
ATOM	2166	CE1	HIS	A	279	24.161	29.484	26.790	1.00	31.48	C
ATOM	2167	NE2	HIS	A	279	23.136	28.810	27.271	1.00	30.92	N
ATOM	2168	N	HIS	A	280	18.942	32.764	25.916	1.00	28.12	N
ATOM	2169	CA	HIS	A	280	17.713	32.827	26.695	1.00	28.50	C
ATOM	2170	C	HIS	A	280	16.884	31.731	26.071	1.00	28.78	C
ATOM	2171	O	HIS	A	280	16.739	31.709	24.851	1.00	29.67	O
ATOM	2172	CB	HIS	A	280	17.069	34.196	26.498	1.00	27.71	C
ATOM	2173	CG	HIS	A	280	15.600	34.223	26.727	1.00	29.69	C
ATOM	2174	ND1	HIS	A	280	15.021	34.905	27.782	1.00	31.66	N
ATOM	2175	CD2	HIS	A	280	14.579	33.648	26.047	1.00	31.45	C
ATOM	2176	CE1	HIS	A	280	13.710	34.743	27.738	1.00	30.66	C
ATOM	2177	NE2	HIS	A	280	13.415	33.985	26.696	1.00	31.28	N
ATOM	2178	N	ILE	A	281	16.346	30.814	26.860	1.00	29.23	N
ATOM	2179	CA	ILE	A	281	15.651	29.652	26.294	1.00	29.56	C
ATOM	2180	C	ILE	A	281	14.311	29.497	26.922	1.00	30.16	C
ATOM	2181	O	ILE	A	281	14.190	29.517	28.135	1.00	30.14	O
ATOM	2182	CB	ILE	A	281	16.478	28.409	26.516	1.00	29.69	C
ATOM	2183	CG1	ILE	A	281	17.707	28.491	25.628	1.00	30.69	C
ATOM	2184	CG2	ILE	A	281	15.686	27.119	26.172	1.00	28.22	C
ATOM	2185	CD1	ILE	A	281	18.689	27.534	25.980	1.00	33.11	C
ATOM	2186	N	GLU	A	282	13.280	29.380	26.103	1.00	31.22	N
ATOM	2187	CA	GLU	A	282	11.931	29.278	26.665	1.00	31.99	C
ATOM	2188	C	GLU	A	282	11.123	28.182	26.007	1.00	31.79	C
ATOM	2189.	O	GLU	A	282	11.131	28.021	24.806	1.00	32.77	O
ATOM	2190	CB	GLU	A	282	11.200	30.638	26.618	1.00	32.16	C
ATOM	2191	CG	GLU	A	282	11.017	31.265	25.253	1.00	33.49	C
ATOM	2192	CD	GLU	A	282	10.378	32.663	25.313	1.00	36.22	C
ATOM	2193	OE1	GLU	A	282	10.879	33.552	26.043	1.00	38.20	O
ATOM	2194	OE2	GLU	A	282	9.380	32.898	24.603	1.00	38.15	O
ATOM	2195	N	SER	A	283	10.454	27.392	26.827	1.00	31.81	N
ATOM	2196	CA	SER	A	283	9.592	26.333	26.331	1.00	30.79	C
ATOM	2197	C	SER	A	283	8.245	26.975	25.950	1.00	30.98	C
ATOM	2198	O	SER	A	283	7.635	27.640	26.780	1.00	30.36	O
ATOM	2199	CB	SER	A	283	9.430	25.305	27.424	1.00	30.62	C
ATOM	2200	OG	SER	A	283	10.586	24.463	27.496	1.00	29.45	O
ATOM	2201	N	LEU	A	284	7.776	26.790	24.709	1.00	31.06	N
ATOM	2202	CA	LEU	A	284	6.587	27.504	24.270	1.00	31.43	C
ATOM	2203	C	LEU	A	284	5.398	27.390	25.204	1.00	31.82	C
ATOM	2204	O	LEU	A	284	5.137	26.333	25.776	1.00	31.15	O
ATOM	2205	CB	LEU	A	284	6.156	27.098	22.895	1.00	31.75	C
ATOM	220.6	CG	LEU	A	284	7.223	27.187	21.829	1.00	33.11	C
ATOM	2207	CD1	LEU	A	284	6.571	27.388	20.478	1.00	33.62	C
ATOM	2208	CD2	LEU	A	284	8.170	28.270	22.142	1.00	32.91	C
ATOM	2209	N	LEU	A	285	4.701	28.512	25.355	1.00	32.74	N
ATOM	2210	CA	LEU	A	285	3.481	28.564	26.147	1.00	34.35	C
ATOM	2211	C	LEU	A	285	2.502	27.591	25.540	1.00	34.74	C
ATOM	2212	O	LEU	A	285	2.375	27.510	24.332	1.00	34.70	O
ATOM	2213	CB	LEU	A	285	2.863	29.946	26.094	1.00	34.26	C
ATOM	2214	CG	LEU	A	285	3.729	31.060	26.638	1.00	34.74	C
ATOM	2215	CD1	LEU	A	285	3.183	32.369	26.160	1.00	34.14	C
ATOM	2216	CD2	LEU	A	285	3.780	30.970	28.136	1.00	34.97	C

ATOM	2217	N	ASN A 286	1.838	26.829	26.380	1.00	35.89	N
ATOM	2218	CA	ASN A 286	0.841	25.863	25.896	1.00	37.12	C
ATOM	2219	C	ASN A 286	1.363	24.809	24.909	1.00	36.14	C
ATOM	2220	O	ASN A 286	0.600	24.306	24.108	1.00	35.85	O
ATOM	2221	CB	ASN A 286	-0.336	26.635	25.274	1.00	37.80	C
ATOM	2222	CG	ASN A 286	-0.882	27.690	26.219	1.00	42.02	C
ATOM	2223	OD1	ASN A 286	-1.326	27.365	27.326	1.00	47.86	O
ATOM	2224	ND2	ASN A 286	-0.809	28.965	25.817	1.00	46.67	N
ATOM	2225	N	GLY A 287	2.653	24.478	24.974	1.00	35.43	N
ATOM	2226	CA	GLY A 287	3.262	23.539	24.057	1.00	34.11	C
ATOM	2227	C	GLY A 287	3.569	22.202	24.666	1.00	34.02	C
ATOM	2228	O	GLY A 287	4.073	21.317	23.977	1.00	34.98	O
ATOM	2229	N	GLY A 288	3.242	22.023	25.944	1.00	33.71	N
ATOM	2230	CA	GLY A 288	3.476	20.759	26.616	1.00	33.00	C
ATOM	2231	C	GLY A 288	4.908	20.692	27.107	1.00	33.19	C
ATOM	2232	O	GLY A 288	5.625	21.681	26.989	1.00	33.40	O
ATOM	2233	N	ILE A 289	5.337	19.540	27.621	1.00	32.87	N
ATOM	2234	CA	ILE A 289	6.647	19.425	28.195	1.00	33.57	C
ATOM	2235	C	ILE A 289	7.695	19.434	27.118	1.00	33.13	C
ATOM	2236	O	ILE A 289	7.454	19.023	25.995	1.00	34.41	O
ATOM	2237	CB	ILE A 289	6.809	18.137	29.006	1.00	34.25	C
ATOM	2238	CG1	ILE A 289	6.789	16.920	28.102	1.00	36.60	C
ATOM	2239	CG2	ILE A 289	5.746	18.005	30.113	1.00	34.91	C
ATOM	2240	CD1	ILE A 289	7.271	15.659	28.834	1.00	38.16	C
ATOM	2241	N	THR A 290	8.891	19.868	27.465	1.00	31.68	N
ATOM	2242	CA	THR A 290	9.956	19.853	26.498	1.00	29.79	C
ATOM	2243	C	THR A 290	11.054	18.938	26.958	1.00	27.97	C
ATOM	2244	O	THR A 290	11.256	18.739	28.133	1.00	26.58	O
ATOM	2245	CB	THR A 290	10.526	21.278	26.305	1.00	30.77	C
ATOM	2246	OG1	THR A 290	10.957	21.827	27.554	1.00	27.89	O
ATOM	2247	CG2	THR A 290	9.458	22.243	25.789	1.00	30.82	C
ATOM	2248	N	ILE A 291	11.787	18.395	26.021	1.00	26.96	N
ATOM	2249	CA	ILE A 291	12.910	17.594	26.383	1.00	27.83	C
ATOM	2250	C	ILE A 291	14.059	17.952	25.493	1.00	27.31	C
ATOM	2251	O	ILE A 291	13.880	18.028	24.289	1.00	27.83	O
ATOM	2252	CB	ILE A 291	12.596	16.104	26.195	1.00	28.72	C
ATOM	2253	CG1	ILE A 291	11.480	15.671	27.140	1.00	29.09	C
ATOM	2254	CG2	ILE A 291	13.865	15.278	26.438	1.00	28.55	C
ATOM	2255	CD1	ILE A 291	11.115	14.232	26.986	1.00	30.86	C
ATOM	2256	N	THR A 292	15.240	18.093	26.074	1.00	26.63	N
ATOM	2257	CA	THR A 292	16.415	18.444	25.333	1.00	26.88	C
ATOM	2258	C	THR A 292	17.587	17.724	25.915	1.00	26.52	C
ATOM	2259	O	THR A 292	17.631	17.524	27.102	1.00	26.40	O
ATOM	2260	CB	THR A 292	16.753	19.971	25.532	1.00	27.41	C
ATOM	2261	OG1	THR A 292	15.652	20.841	25.187	1.00	28.64	O
ATOM	2262	CG2	THR A 292	17.852	20.398	24.592	1.00	28.03	C
ATOM	2263	N	VAL A 293	18.577	17.414	25.093	1.00	26.32	N
ATOM	2264	CA	VAL A 293	19.834	16.896	25.585	1.00	26.86	C
ATOM	2265	C	VAL A 293	20.964	17.718	24.978	1.00	27.24	C
ATOM	2266	O	VAL A 293	21.011	17.892	23.757	1.00	26.60	O
ATOM	2267	CB	VAL A 293	20.029	15.422	25.226	1.00	27.56	C
ATOM	2268	CG1	VAL A 293	21.472	15.004	25.411	1.00	27.42	C
ATOM	2269	CG2	VAL A 293	19.138	14.546	26.126	1.00	29.64	C
ATOM	2270	N	ASN A 294	21.849	18.278	25.814	1.00	27.26	N
ATOM	2271	CA	ASN A 294	22.960	19.055	25.258	1.00	27.81	C
ATOM	2272	C	ASN A 294	24.253	18.268	25.281	1.00	27.79	C
ATOM	2273	O	ASN A 294	24.338	17.177	25.883	1.00	28.63	O
ATOM	2274	CB	ASN A 294	23.118	20.446	25.881	1.00	27.69	C
ATOM	2275	CG	ASN A 294	23.703	20.405	27.287	1.00	30.08	C
ATOM	2276	OD1	ASN A 294	24.309	19.397	27.677	1.00	29.80	O
ATOM	2277	ND2	ASN A 294	23.513	21.506	28.064	1.00	28.15	N

ATOM	2278	N	PHE	A	295	25.235	18.816	24.576	1.00	27.46	N
ATOM	2279	CA	PHE	A	295	26.548	18.219	24.428	1.00	27.53	C
ATOM	2280	C	PHE	A	295	27.543	19.352	24.675	1.00	28.01	C
ATOM	2281	O	PHE	A	295	27.720	20.239	23.811	1.00	28.48	O
ATOM	2282	CB	PHE	A	295	26.756	17.703	23.009	1.00	27.33	C
ATOM	2283	CG	PHE	A	295	25.955	16.487	22.658	1.00	27.87	C
ATOM	2284	CD1	PHE	A	295	24.586	16.560	22.496	1.00	27.75	C
ATOM	2285	CD2	PHE	A	295	26.581	15.287	22.426	1.00	26.57	C
ATOM	2286	CE1	PHE	A	295	23.892	15.466	22.147	1.00	28.45	C
ATOM	2287	CE2	PHE	A	295	25.869	14.187	22.095	1.00	27.40	C
ATOM	2288	CZ	PHE	A	295	24.541	14.262	21.952	1.00	27.57	C
ATOM	2289	N	TRP	A	296	28.166	19.346	25.852	1.00	28.46	N
ATOM	2290	CA	TRP	A	296	29.097	20.402	26.249	1.00	29.05	C
ATOM	2291	C	TRP	A	296	30.545	19.950	26.077	1.00	29.39	C
ATOM	2292	O	TRP	A	296	30.981	18.942	26.663	1.00	29.90	O
ATOM	2293	CB	TRP	A	296	28.850	20.825	27.696	1.00	29.23	C
ATOM	2294	CG	TRP	A	296	27.917	21.982	27.908	1.00	31.21	C
ATOM	2295	CD1	TRP	A	296	27.805	23.080	27.135	1.00	33.45	C
ATOM	2296	CD2	TRP	A	296	26.995	22.171	28.996	1.00	33.70	C
ATOM	2297	NE1	TRP	A	296	26.864	23.941	27.651	1.00	33.91	N
ATOM	2298	CE2	TRP	A	296	26.344	23.403	28.787	1.00	33.49	C
ATOM	2299	CE3	TRP	A	296	26.638	21.414	30.113	1.00	36.30	C
ATOM	2300	CZ2	TRP	A	296	25.377	23.902	29.642	1.00	35.59	C
ATOM	2301	CZ3	TRP	A	296	25.643	21.899	30.967	1.00	37.80	C
ATOM	2302	CH2	TRP	A	296	25.034	23.141	30.727	1.00	37.39	C
ATOM	2303	N	TYR	A	297	31.288	20.720	25.292	1.00	29.87	N
ATOM	2304	CA	TYR	A	297	32.693	20.472	25.017	1.00	30.43	C
ATOM	2305	C	TYR	A	297	33.548	21.629	25.518	1.00	30.98	C
ATOM	2306	O	TYR	A	297	33.167	22.765	25.387	1.00	29.50	O
ATOM	2307	CB	TYR	A	297	32.909	20.334	23.502	1.00	30.36	C
ATOM	2308	CG	TYR	A	297	32.304	19.083	22.919	1.00	30.07	C
ATOM	2309	CD1	TYR	A	297	30.946	19.012	22.627	1.00	29.74	C
ATOM	2310	CD2	TYR	A	297	33.083	17.960	22.687	1.00	28.56	C
ATOM	2311	CE1	TYR	A	297	30.397	17.859	22.105	1.00	28.46	C
ATOM	2312	CE2	TYR	A	297	32.546	16.800	22.213	1.00	27.77	C
ATOM	2313	CZ	TYR	A	297	31.202	16.758	21.913	1.00	28.10	C
ATOM	2314	OH	TYR	A	297	30.654	15.613	21.438	1.00	27.72	O
ATOM	2315	N	LYS	A	298	34.723	21.325	26.060	1.00	32.77	N
ATOM	2316	CA	LYS	A	298	35.671	22.349	26.470	1.00	34.43	C
ATOM	2317	C	LYS	A	298	36.126	23.014	25.216	1.00	34.91	C
ATOM	2318	O	LYS	A	298	36.236	22.373	24.194	1.00	35.28	O
ATOM	2319	CB	LYS	A	298	36.865	21.749	27.221	1.00	35.25	C
ATOM	2320	CG	LYS	A	298	36.595	21.446	28.725	1.00	38.48	C
ATOM	2321	CD	LYS	A	298	37.834	20.990	29.532	1.00	42.40	C
ATOM	2322	CE	LYS	A	298	37.429	20.600	30.991	1.00	45.34	C
ATOM	2323	NZ	LYS	A	298	38.515	19.883	31.770	1.00	49.07	N
ATOM	2324	N	GLY	A	299	36.384	24.305	25.267	1.00	36.67	N
ATOM	2325	CA	GLY	A	299	36.837	24.998	24.080	1.00	38.01	C
ATOM	2326	C	GLY	A	299	38.249	24.618	23.689	1.00	39.33	C
ATOM	2327	O	GLY	A	299	38.965	23.987	24.437	1.00	39.19	O
ATOM	2328	N	ALA	A	300	38.644	25.017	22.498	1.00	41.68	N
ATOM	2329	CA	ALA	A	300	40.014	24.844	22.048	1.00	43.93	C
ATOM	2330	C	ALA	A	300	40.964	25.618	22.940	1.00	45.88	C
ATOM	2331	O	ALA	A	300	40.558	26.437	23.741	1.00	46.12	O
ATOM	2332	CB	ALA	A	300	40.148	25.343	20.639	1.00	43.86	C
ATOM	2333	N	PRO	A	301	42.254	25.393	22.773	1.00	49.19	N
ATOM	2334	CA	PRO	A	301	43.251	26.084	23.605	1.00	50.79	C
ATOM	2335	C	PRO	A	301	43.465	27.525	23.204	1.00	52.01	C
ATOM	2336	O	PRO	A	301	43.302	27.869	22.041	1.00	52.73	O
ATOM	2337	CB	PRO	A	301	44.534	25.325	23.303	1.00	50.51	C
ATOM	2338	CG	PRO	A	301	44.357	24.908	21.884	1.00	50.75	C

ATOM	2339	CD	PRO	A	301	42.890	24.521	21.766	1.00	49.57	C
ATOM	2340	N	THR	A	302	43.831	28.346	24.169	1.00	53.76	N
ATOM	2341	CA	THR	A	302	44.173	29.736	23.928	1.00	55.20	C
ATOM	2342	C	THR	A	302	45.563	29.720	23.307	1.00	56.14	C
ATOM	2343	O	THR	A	302	46.504	29.273	23.980	1.00	56.50	O
ATOM	2344	CB	THR	A	302	44.249	30.449	25.274	1.00	55.30	C
ATOM	2345	OG1	THR	A	302	42.959	30.448	25.909	1.00	57.92	O
ATOM	2346	CG2	THR	A	302	44.552	31.886	25.090	1.00	56.33	C
ATOM	2347	N	PRO	A	303	45.743	30.239	22.086	1.00	56.60	N
ATOM	2348	CA	PRO	A	303	47.057	30.145	21.427	1.00	56.45	C
ATOM	2349	C	PRO	A	303	48.168	30.743	22.280	1.00	56.31	C
ATOM	2350	O	PRO	A	303	47.845	31.449	23.235	1.00	56.29	O
ATOM	2351	CB	PRO	A	303	46.883	30.989	20.168	1.00	56.55	C
ATOM	2352	CG	PRO	A	303	45.418	31.007	19.927	1.00	56.34	C
ATOM	2353	CD	PRO	A	303	44.812	31.082	21.309	1.00	56.48	C
ATOM	2354	N	GLU	A	307	46.896	37.001	18.664	1.00	61.01	N
ATOM	2355	CA	GLU	A	307	46.873	37.991	17.591	1.00	61.50	C
ATOM	2356	C	GLU	A	307	45.852	39.079	17.834	1.00	60.73	C
ATOM	2357	O	GLU	A	307	44.755	38.828	18.308	1.00	61.45	O
ATOM	2358	CB	GLU	A	307	46.614	37.356	16.205	1.00	62.21	C
ATOM	2359	CG	GLU	A	307	46.871	38.339	15.045	1.00	63.86	C
ATOM	2360	CD	GLU	A	307	46.898	37.697	13.665	1.00	65.26	C
ATOM	2361	OE1	GLU	A	307	46.468	36.535	13.516	1.00	65.73	O
ATOM	2362	OE2	GLU	A	307	47.342	38.382	12.718	1.00	67.94	O
ATOM	2363	N	TYR	A	308	46.237	40.302	17.513	1.00	59.88	N
ATOM	2364	CA	TYR	A	308	45.349	41.441	17.639	1.00	59.19	C
ATOM	2365	C	TYR	A	308	44.706	41.622	16.279	1.00	58.70	C
ATOM	2366	O	TYR	A	308	45.224	41.120	15.273	1.00	59.29	O
ATOM	2367	CB	TYR	A	308	46.133	42.665	18.095	1.00	59.18	C
ATOM	2368	CG	TYR	A	308	46.677	42.418	19.478	1.00	59.73	C
ATOM	2369	CD1	TYR	A	308	45.904	42.708	20.605	1.00	59.74	C
ATOM	2370	CD2	TYR	A	308	47.912	41.801	19.665	1.00	59.94	C
ATOM	2371	CE1	TYR	A	308	46.357	42.438	21.869	1.00	59.94	C
ATOM	2372	CE2	TYR	A	308	48.377	41.519	20.933	1.00	61.17	C
ATOM	2373	CZ	TYR	A	308	47.592	41.843	22.038	1.00	61.68	C
ATOM	2374	OH	TYR	A	308	48.032	41.579	23.316	1.00	63.29	O
ATOM	2375	N	PRO	A	309	43.541	42.258	16.233	1.00	57.37	N
ATOM	2376	CA	PRO	A	309	42.849	42.815	17.411	1.00	55.72	C
ATOM	2377	C	PRO	A	309	42.113	41.742	18.225	1.00	52.85	C
ATOM	2378	O	PRO	A	309	41.627	40.815	17.613	1.00	53.22	O
ATOM	2379	CB	PRO	A	309	41.823	43.755	16.777	1.00	56.31	C
ATOM	2380	CG	PRO	A	309	41.512	43.113	15.410	1.00	57.04	C
ATOM	2381	CD	PRO	A	309	42.774	42.431	14.984	1.00	57.43	C
ATOM	2382	N	LEU	A	310	41.998	41.879	19.544	1.00	49.67	N
ATOM	2383	CA	LEU	A	310	41.368	40.825	20.363	1.00	47.23	C
ATOM	2384	C	LEU	A	310	39.870	40.656	20.128	1.00	45.07	C
ATOM	2385	O	LEU	A	310	39.131	41.635	19.956	1.00	45.94	O
ATOM	2386	CB	LEU	A	310	41.568	41.109	21.837	1.00	46.99	C
ATOM	2387	CG	LEU	A	310	42.579	40.351	22.706	1.00	46.52	C
ATOM	2388	CD1	LEU	A	310	43.856	40.028	22.048	1.00	45.64	C
ATOM	2389	CD2	LEU	A	310	42.840	41.179	23.975	1.00	46.57	C
ATOM	2390	N	LYS	A	311	39.408	39.414	20.139	1.00	41.52	N
ATOM	2391	CA	LYS	A	311	37.987	39.155	20.003	1.00	38.55	C
ATOM	2392	C	LYS	A	311	37.179	39.463	21.276	1.00	35.80	C
ATOM	2393	O	LYS	A	311	37.664	39.425	22.400	1.00	34.43	O
ATOM	2394	CB	LYS	A	311	37.760	37.727	19.553	1.00	39.46	C
ATOM	2395	N	ALA	A	312	35.920	39.786	21.076	1.00	32.82	N
ATOM	2396	CA	ALA	A	312	35.055	40.081	22.185	1.00	30.91	C
ATOM	2397	C	ALA	A	312	35.152	39.033	23.279	1.00	30.00	C
ATOM	2398	O	ALA	A	312	35.231	39.382	24.442	1.00	28.68	O
ATOM	2399	CB	ALA	A	312	33.625	40.234	21.707	1.00	30.07	C

ATOM	2400	N	HIS A 313	35.148	37.753	22.916	1.00 29.85	N
ATOM	2401	CA	HIS A 313	35.125	36.727	23.931	1.00 30.47	C
ATOM	2402	C	HIS A 313	36.410	36.710	24.689	1.00 29.99	C
ATOM	2403	O	HIS A 313	36.439	36.320	25.846	1.00 29.25	O
ATOM	2404	CB	HIS A 313	34.787	35.331	23.392	1.00 31.64	C
ATOM	2405	CG	HIS A 313	35.860	34.714	22.566	1.00 35.54	C
ATOM	2406	ND1	HIS A 313	35.987	34.950	21.208	1.00 41.10	N
ATOM	2407	CD2	HIS A 313	36.844	33.846	22.891	1.00 40.77	C
ATOM	2408	CE1	HIS A 313	37.047	34.303	20.750	1.00 40.02	C
ATOM	2409	NE2	HIS A 313	37.567	33.603	21.743	1.00 41.82	N
ATOM	2410	N	GLN A 314	37.482	37.137	24.056	1.00 29.68	N
ATOM	2411	CA	GLN A 314	38.754	37.185	24.751	1.00 29.77	C
ATOM	2412	C	GLN A 314	38.729	38.294	25.817	1.00 30.57	C
ATOM	2413	O	GLN A 314	39.222	38.120	26.956	1.00 29.69	O
ATOM	2414	CB	GLN A 314	39.893	37.401	23.743	1.00 30.02	C
ATOM	2415	CG	GLN A 314	40.111	36.182	22.786	1.00 29.84	C
ATOM	2416	CD	GLN A 314	41.126	36.437	21.687	1.00 31.76	C
ATOM	2417	OE1	GLN A 314	40.982	37.377	20.885	1.00 32.81	O
ATOM	2418	NE2	GLN A 314	42.160	35.594	21.637	1.00 34.23	N
ATOM	2419	N	LYS A 315	38.111	39.421	25.471	1.00 30.44	N
ATOM	2420	CA	LYS A 315	38.026	40.491	26.431	1.00 31.27	C
ATOM	2421	C	LYS A 315	37.192	40.023	27.635	1.00 30.75	C
ATOM	2422	O	LYS A 315	37.511	40.373	28.784	1.00 29.60	O
ATOM	2423	CB	LYS A 315	37.461	41.752	25.808	1.00 31.76	C
ATOM	2424	CG	LYS A 315	38.483	42.491	24.982	1.00 33.90	C
ATOM	2425	CD	LYS A 315	37.902	43.711	24.329	1.00 37.97	C
ATOM	2426	CE	LYS A 315	38.911	44.380	23.419	1.00 41.69	C
ATOM	2427	NZ	LYS A 315	38.264	45.411	22.536	1.00 44.93	N
ATOM	2428	N	VAL A 316	36.163	39.216	27.362	1.00 29.26	N
ATOM	2429	CA	VAL A 316	35.318	38.731	28.422	1.00 29.23	C
ATOM	2430	C	VAL A 316	36.152	37.841	29.339	1.00 29.87	C
ATOM	2431	O	VAL A 316	36.075	37.926	30.584	1.00 30.33	O
ATOM	2432	CB	VAL A 316	34.079	37.973	27.900	1.00 28.68	C
ATOM	2433	CG1	VAL A 316	33.306	37.376	29.037	1.00 28.32	C
ATOM	2434	CG2	VAL A 316	33.144	38.887	27.136	1.00 28.57	C
ATOM	2435	N	ALA A 317	36.976	37.007	28.728	1.00 29.36	N
ATOM	2436	CA	ALA A 317	37.878	36.136	29.487	1.00 29.26	C
ATOM	2437	C	ALA A 317	38.776	36.941	30.389	1.00 28.08	C
ATOM	2438	O	ALA A 317	39.052	36.564	31.519	1.00 27.65	O
ATOM	2439	CB	ALA A 317	38.733	35.267	28.561	1.00 28.70	C
ATOM	2440	N	ILE A 318	39.211	38.068	29.873	1.00 28.33	N
ATOM	2441	CA	ILE A 318	40.083	38.945	30.628	1.00 28.40	C
ATOM	2442	C	ILE A 318	39.338	39.526	31.825	1.00 28.94	C
ATOM	2443	O	ILE A 318	39.880	39.503	32.924	1.00 29.70	O
ATOM	2444	CB	ILE A 318	40.697	40.053	29.732	1.00 27.74	C
ATOM	2445	CG1	ILE A 318	41.683	39.443	28.743	1.00 28.14	C
ATOM	2446	CG2	ILE A 318	41.433	41.082	30.577	1.00 27.98	C
ATOM	2447	CD1	ILE A 318	42.271	40.447	27.759	1.00 29.17	C
ATOM	2448	N	MET A 319	38.115	40.032	31.630	1.00 28.75	N
ATOM	2449	CA	MET A 319	37.402	40.666	32.735	1.00 28.64	C
ATOM	2450	C	MET A 319	37.140	39.669	33.877	1.00 29.22	C
ATOM	2451	O	MET A 319	37.308	39.981	35.082	1.00 30.32	O
ATOM	2452	CB	MET A 319	36.123	41.355	32.273	1.00 28.33	C
ATOM	2453	CG	MET A 319	36.327	42.553	31.334	1.00 27.88	C
ATOM	2454	SD	MET A 319	34.779	43.349	30.857	1.00 29.90	S
ATOM	2455	CE	MET A 319	34.146	42.288	29.455	1.00 28.71	C
ATOM	2456	N	ARG A 320	36.802	38.446	33.515	1.00 29.22	N
ATOM	2457	CA	ARG A 320	36.543	37.429	34.520	1.00 28.75	C
ATOM	2458	C	ARG A 320	37.806	37.221	35.325	1.00 28.81	C
ATOM	2459	O	ARG A 320	37.782	37.132	36.569	1.00 28.76	O
ATOM	2460	CB	ARG A 320	36.142	36.118	33.861	1.00 28.67	C

ATOM	2461	CG	ARG	A	320	34.810	36.125	33.120	1.00	29.62	C
ATOM	2462	CD	ARG	A	320	34.371	34.747	32.603	1.00	27.74	C
ATOM	2463	NE	ARG	A	320	34.193	33.843	33.716	1.00	24.81	N
ATOM	2464	CZ	ARG	A	320	33.161	33.887	34.526	1.00	27.65	C
ATOM	2465	NH1	ARG	A	320	32.180	34.752	34.330	1.00	29.97	N
ATOM	2466	NH2	ARG	A	320	33.088	33.064	35.542	1.00	27.59	N
ATOM	2467	N	ASN	A	321	38.933	37.167	34.627	1.00	28.60	N
ATOM	2468	CA	ASN	A	321	40.185	36.884	35.320	1.00	28.16	C
ATOM	2469	C	ASN	A	321	40.526	38.003	36.291	1.00	28.13	C
ATOM	2470	O	ASN	A	321	40.945	37.742	37.423	1.00	29.13	O
ATOM	2471	CB	ASN	A	321	41.318	36.615	34.319	1.00	28.09	C
ATOM	2472	CG	ASN	A	321	41.317	35.177	33.817	1.00	27.94	C
ATOM	2473	OD1	ASN	A	321	40.924	34.286	34.555	1.00	28.53	O
ATOM	2474	ND2	ASN	A	321	41.751	34.946	32.560	1.00	23.58	N
ATOM	2475	N	ILE	A	322	40.337	39.250	35.876	1.00	27.49	N
ATOM	2476	CA	ILE	A	322	40.659	40.350	36.749	1.00	27.70	C
ATOM	2477	C	ILE	A	322	39.792	40.209	38.017	1.00	27.39	C
ATOM	2478	O	ILE	A	322	40.284	40.315	39.101	1.00	26.48	O
ATOM	2479	CB	ILE	A	322	40.353	41.680	36.059	1.00	28.04	C
ATOM	2480	CG1	ILE	A	322	41.302	41.941	34.897	1.00	30.79	C
ATOM	2481	CG2	ILE	A	322	40.426	42.832	37.038	1.00	28.09	C
ATOM	2482	CD1	ILE	A	322	42.756	41.766	35.226	1.00	32.31	C
ATOM	2483	N	GLU	A	323	38.494	39.961	37.854	1.00	27.37	N
ATOM	2484	CA	GLU	A	323	37.618	39.868	38.985	1.00	27.48	C
ATOM	2485	C	GLU	A	323	38.060	38.784	39.881	1.00	27.52	C
ATOM	2486	O	GLU	A	323	38.096	38.956	41.079	1.00	26.90	O
ATOM	2487	CB	GLU	A	323	36.183	39.637	38.558	1.00	27.48	C
ATOM	2488	CG	GLU	A	323	35.592	40.849	37.910	1.00	27.65	C
ATOM	2489	CD	GLU	A	323	34.199	40.631	37.318	1.00	25.69	C
ATOM	2490	OE1	GLU	A	323	33.236	40.358	38.050	1.00	24.42	O
ATOM	2491	OE2	GLU	A	323	34.072	40.808	36.101	1.00	24.98	O
ATOM	2492	N	LYS	A	324	38.419	37.659	39.297	1.00	29.13	N
ATOM	2493	CA	LYS	A	324	38.845	36.508	40.097	1.00	30.35	C
ATOM	2494	C	LYS	A	324	40.099	36.825	40.912	1.00	31.16	C
ATOM	2495	O	LYS	A	324	40.123	36.547	42.111	1.00	32.01	O
ATOM	2496	CB	LYS	A	324	39.116	35.289	39.222	1.00	30.16	C
ATOM	2497	CG	LYS	A	324	37.887	34.625	38.648	1.00	30.63	C
ATOM	2498	CD	LYS	A	324	38.344	33.454	37.765	1.00	30.70	C
ATOM	2499	CE	LYS	A	324	37.204	32.713	37.038	1.00	30.66	C
ATOM	2500	NZ	LYS	A	324	37.728	31.451	36.325	1.00	27.19	N
ATOM	2501	N	MET	A	325	41.119	37.401	40.270	1.00	31.84	N
ATOM	2502	CA	MET	A	325	42.392	37.735	40.939	1.00	32.71	C
ATOM	2503	C	MET	A	325	42.216	38.743	42.078	1.00	32.44	C
ATOM	2504	O	MET	A	325	42.840	38.637	43.141	1.00	30.36	O
ATOM	2505	CB	MET	A	325	43.417	38.276	39.923	1.00	32.98	C
ATOM	2506	CG	MET	A	325	43.978	37.216	39.032	1.00	36.70	C
ATOM	2507	SD	MET	A	325	44.734	37.879	37.532	1.00	46.02	S
ATOM	2508	CE	MET	A	325	45.616	39.197	38.250	1.00	46.11	C
ATOM	2509	N	LEU	A	326	41.376	39.738	41.837	1.00	33.01	N
ATOM	2510	CA	LEU	A	326	41.116	40.756	42.852	1.00	34.17	C
ATOM	2511	C	LEU	A	326	40.490	40.151	44.083	1.00	33.83	C
ATOM	2512	O	LEU	A	326	40.871	40.464	45.188	1.00	33.22	O
ATOM	2513	CB	LEU	A	326	40.185	41.818	42.305	1.00	34.61	C
ATOM	2514	CG	LEU	A	326	40.740	43.194	41.974	1.00	37.32	C
ATOM	2515	CD1	LEU	A	326	42.251	43.297	41.924	1.00	39.32	C
ATOM	2516	CD2	LEU	A	326	40.158	43.607	40.643	1.00	39.20	C
ATOM	2517	N	GLY	A	327	39.534	39.262	43.861	1.00	34.50	N
ATOM	2518	CA	GLY	A	327	38.842	38.569	44.930	1.00	34.87	C
ATOM	2519	C	GLY	A	327	39.796	37.776	45.779	1.00	35.34	C
ATOM	2520	O	GLY	A	327	39.728	37.810	47.016	1.00	35.51	O
ATOM	2521	N	GLU	A	328	40.725	37.081	45.139	1.00	35.88	N

ATOM	2522	CA	GLU	A	328	41.708	36.346	45.926	1.00	36.96	C
ATOM	2523	C	GLU	A	328	42.668	37.302	46.614	1.00	35.46	C
ATOM	2524	O	GLU	A	328	42.958	37.144	47.799	1.00	35.65	O
ATOM	2525	CB	GLU	A	328	42.465	35.340	45.074	1.00	37.89	C
ATOM	2526	CG	GLU	A	328	41.555	34.272	44.481	1.00	43.40	C
ATOM	2527	CD	GLU	A	328	41.694	32.905	45.135	1.00	50.39	C
ATOM	2528	OE1	GLU	A	328	42.006	32.861	46.361	1.00	53.07	O
ATOM	2529	OE2	GLU	A	328	41.503	31.876	44.396	1.00	53.24	O
ATOM	2530	N	ALA	A	329	43.110	38.331	45.906	1.00	34.23	N
ATOM	2531	CA	ALA	A	329	44.130	39.208	46.469	1.00	33.82	C
ATOM	2532	C	ALA	A	329	43.652	40.031	47.632	1.00	33.70	C
ATOM	2533	O	ALA	A	329	44.384	40.279	48.547	1.00	33.79	O
ATOM	2534	CB	ALA	A	329	44.711	40.079	45.428	1.00	33.36	C
ATOM	2535	N	LEU	A	330	42.410	40.451	47.602	1.00	34.57	N
ATOM	2536	CA	LEU	A	330	41.869	41.243	48.694	1.00	35.04	C
ATOM	2537	C	LEU	A	330	41.351	40.397	49.837	1.00	35.29	C
ATOM	2538	O	LEU	A	330	41.011	40.922	50.884	1.00	35.39	O
ATOM	2539	CB	LEU	A	330	40.721	42.096	48.182	1.00	34.85	C
ATOM	2540	CG	LEU	A	330	41.141	43.081	47.095	1.00	35.83	C
ATOM	2541	CD1	LEU	A	330	39.907	43.564	46.304	1.00	37.05	C
ATOM	2542	CD2	LEU	A	330	41.842	44.244	47.662	1.00	34.12	C
ATOM	2543	N	GLY	A	331	41.223	39.098	49.619	1.00	36.20	N
ATOM	2544	CA	GLY	A	331	40.751	38.207	50.659	1.00	36.87	C
ATOM	2545	C	GLY	A	331	39.260	38.250	50.957	1.00	37.48	C
ATOM	2546	O	GLY	A	331	38.807	37.527	51.846	1.00	38.53	O
ATOM	2547	N	ASN	A	332	38.509	39.085	50.242	1.00	37.67	N
ATOM	2548	CA	ASN	A	332	37.069	39.175	50.399	1.00	38.06	C
ATOM	2549	C	ASN	A	332	36.446	39.652	49.088	1.00	37.75	C
ATOM	2550	O	ASN	A	332	36.688	40.760	48.661	1.00	37.42	O
ATOM	2551	CB	ASN	A	332	36.728	40.152	51.523	1.00	38.50	C
ATOM	2552	CG	ASN	A	332	35.272	40.103	51.896	1.00	40.34	C
ATOM	2553	OD1	ASN	A	332	34.493	39.377	51.274	1.00	43.85	O
ATOM	2554	ND2	ASN	A	332	34.894	40.841	52.937	1.00	41.75	N
ATOM	2555	N	PRO	A	333	35.628	38.839	48.451	1.00	37.92	N
ATOM	2556	CA	PRO	A	333	35.076	39.209	47.146	1.00	37.97	C
ATOM	2557	C	PRO	A	333	34.245	40.456	47.211	1.00	37.96	C
ATOM	2558	O	PRO	A	333	34.086	41.143	46.204	1.00	37.81	O
ATOM	2559	CB	PRO	A	333	34.182	38.024	46.770	1.00	37.85	C
ATOM	2560	CG	PRO	A	333	34.327	37.037	47.801	1.00	38.26	C
ATOM	2561	CD	PRO	A	333	35.161	37.530	48.908	1.00	37.98	C
ATOM	2562	N	GLN	A	334	33.702	40.741	48.381	1.00	38.23	N
ATOM	2563	CA	GLN	A	334	32.872	41.928	48.539	1.00	38.84	C
ATOM	2564	C	GLN	A	334	33.713	43.177	48.442	1.00	37.04	C
ATOM	2565	O	GLN	A	334	33.185	44.254	48.276	1.00	37.42	O
ATOM	2566	CB	GLN	A	334	32.041	41.870	49.850	1.00	39.97	C
ATOM	2567	CG	GLN	A	334	30.696	41.057	49.612	1.00	44.72	C
ATOM	2568	CD	GLN	A	334	29.669	41.117	50.756	1.00	49.62	C
ATOM	2569	OE1	GLN	A	334	29.666	42.067	51.566	1.00	53.65	O
ATOM	2570	NE2	GLN	A	334	28.781	40.106	50.808	1.00	50.33	N
ATOM	2571	N	GLU	A	335	35.026	43.036	48.489	1.00	35.15	N
ATOM	2572	CA	GLU	A	335	35.872	44.193	48.385	1.00	34.55	C
ATOM	2573	C	GLU	A	335	36.197	44.510	46.927	1.00	33.05	C
ATOM	2574	O	GLU	A	335	36.760	45.564	46.640	1.00	32.79	O
ATOM	2575	CB	GLU	A	335	37.144	44.028	49.247	1.00	35.19	C
ATOM	2576	CG	GLU	A	335	36.927	44.326	50.727	1.00	37.92	C
ATOM	2577	CD	GLU	A	335	38.195	44.232	51.550	1.00	43.46	C
ATOM	2578	OE1	GLU	A	335	39.179	44.916	51.179	1.00	46.92	O
ATOM	2579	OE2	GLU	A	335	38.211	43.499	52.589	1.00	49.17	O
ATOM	2580	N	VAL	A	336	35.792	43.633	46.005	1.00	31.25	N
ATOM	2581	CA	VAL	A	336	36.081	43.810	44.579	1.00	29.91	C
ATOM	2582	C	VAL	A	336	35.505	45.076	43.957	1.00	29.08	C

ATOM	2583	O	VAL	A	336	36.177	45.816	43.246	1.00 29.08	O
ATOM	2584	CB	VAL	A	336	35.648	42.584	43.791	1.00 30.21	C
ATOM	2585	CG1	VAL	A	336	35.743	42.805	42.325	1.00 29.11	C
ATOM	2586	CG2	VAL	A	336	36.540	41.391	44.161	1.00 29.98	C
ATOM	2587	N	GLY	A	337	34.263	45.354	44.240	1.00 28.54	N
ATOM	2588	CA	GLY	A	337	33.644	46.546	43.722	1.00 27.74	C
ATOM	2589	C	GLY	A	337	34.285	47.848	44.130	1.00 27.24	C
ATOM	2590	O	GLY	A	337	34.599	48.687	43.281	1.00 26.81	O
ATOM	2591	N	PRO	A	338	34.365	48.094	45.428	1.00 27.19	N
ATOM	2592	CA	PRO	A	338	34.994	49.334	45.905	1.00 26.74	C
ATOM	2593	C	PRO	A	338	36.378	49.553	45.328	1.00 26.42	C
ATOM	2594	O	PRO	A	338	36.678	50.668	44.932	1.00 27.57	O
ATOM	2595	CB	PRO	A	338	35.008	49.173	47.426	1.00 25.92	C
ATOM	2596	CG	PRO	A	338	33.800	48.384	47.682	1.00 27.15	C
ATOM	2597	CD	PRO	A	338	33.750	47.326	46.531	1.00 27.09	C
ATOM	2598	N	LEU	A	339	37.199	48.533	45.225	1.00 25.95	N
ATOM	2599	CA	LEU	A	339	38.505	48.762	44.652	1.00 26.15	C
ATOM	2600	C	LEU	A	339	38.384	49.205	43.192	1.00 25.74	C
ATOM	2601	O	LEU	A	339	39.021	50.203	42.784	1.00 23.97	O
ATOM	2602	CB	LEU	A	339	39.375	47.521	44.763	1.00 27.19	C
ATOM	2603	CG	LEU	A	339	40.835	47.787	44.367	1.00 28.71	C
ATOM	2604	CD1	LEU	A	339	41.805	47.124	45.241	1.00 31.14	C
ATOM	2605	CD2	LEU	A	339	41.028	47.264	42.987	1.00 30.12	C
ATOM	2606	N	LEU	A	340	37.555	48.491	42.416	1.00 25.64	N
ATOM	2607	CA	LEU	A	340	37.364	48.841	40.991	1.00 25.90	C
ATOM	2608	C	LEU	A	340	36.860	50.261	40.871	1.00 26.04	C
ATOM	2609	O	LEU	A	340	37.324	51.044	40.034	1.00 25.93	O
ATOM	2610	CB	LEU	A	340	36.399	47.900	40.293	1.00 25.64	C
ATOM	2611	CG	LEU	A	340	36.996	46.521	40.072	1.00 27.50	C
ATOM	2612	CD1	LEU	A	340	35.943	45.559	39.555	1.00 26.88	C
ATOM	2613	CD2	LEU	A	340	38.221	46.587	39.138	1.00 26.63	C
ATOM	2614	N	ASN	A	341	35.914	50.610	41.720	1.00 26.45	N
ATOM	2615	CA	ASN	A	341	35.377	51.963	41.669	1.00 27.35	C
ATOM	2616	C	ASN	A	341	36.450	52.983	41.983	1.00 27.08	C
ATOM	2617	O	ASN	A	341	36.578	54.012	41.324	1.00 26.82	O
ATOM	2618	CB	ASN	A	341	34.183	52.117	42.619	1.00 27.50	C
ATOM	2619	CG	ASN	A	341	32.901	51.709	41.975	1.00 28.85	C
ATOM	2620	OD1	ASN	A	341	32.509	52.283	40.957	1.00 37.23	O
ATOM	2621	ND2	ASN	A	341	32.263	50.697	42.504	1.00 29.29	N
ATOM	2622	N	THR	A	342	37.234	52.665	42.994	1.00 26.89	N
ATOM	2623	CA	THR	A	342	38.321	53.509	43.355	1.00 27.22	C
ATOM	2624	C	THR	A	342	39.301	53.629	42.191	1.00 27.16	C
ATOM	2625	O	THR	A	342	39.861	54.686	42.003	1.00 26.86	O
ATOM	2626	CB	THR	A	342	38.995	52.934	44.568	1.00 27.76	C
ATOM	2627	OG1	THR	A	342	38.212	53.248	45.734	1.00 29.14	O
ATOM	2628	CG2	THR	A	342	40.367	53.604	44.784	1.00 28.62	C
ATOM	2629	N	MET	A	343	39.502	52.560	41.419	1.00 26.80	N
ATOM	2630	CA	MET	A	343	40.401	52.623	40.282	1.00 27.48	C
ATOM	2631	C	MET	A	343	39.927	53.552	39.174	1.00 27.78	C
ATOM	2632	O	MET	A	343	40.762	54.229	38.554	1.00 26.44	O
ATOM	2633	CB	MET	A	343	40.602	51.253	39.634	1.00 28.13	C
ATOM	2634	CG	MET	A	343	41.758	50.440	40.125	1.00 30.19	C
ATOM	2635	SD	MET	A	343	42.279	49.088	38.964	1.00 32.27	S
ATOM	2636	CE	MET	A	343	41.049	48.127	39.221	1.00 34.83	C
ATOM	2637	N	ILE	A	344	38.619	53.568	38.864	1.00 28.41	N
ATOM	2638	CA	ILE	A	344	38.193	54.350	37.700	1.00 29.03	C
ATOM	2639	C	ILE	A	344	37.712	55.748	37.957	1.00 28.17	C
ATOM	2640	O	ILE	A	344	37.879	56.587	37.064	1.00 27.26	O
ATOM	2641	CB	ILE	A	344	37.146	53.650	36.818	1.00 29.47	C
ATOM	2642	CG1	ILE	A	344	35.766	53.866	37.384	1.00 32.69	C
ATOM	2643	CG2	ILE	A	344	37.457	52.176	36.667	1.00 32.43	C

ATOM	2644	CD1	ILE A 344	34.724	53.358	36.590	1.00	35.46		C
ATOM	2645	N	LYS A 345	37.107	56.032	39.108	1.00	27.79		N
ATOM	2646	CA	LYS A 345	36.518	57.364	39.218	1.00	28.48		C
ATOM	2647	C	LYS A 345	37.489	58.485	39.219	1.00	27.72		C
ATOM	2648	O	LYS A 345	38.428	58.555	40.000	1.00	27.37		O
ATOM	2649	CB	LYS A 345	35.542	57.611	40.343	1.00	29.78		C
ATOM	2650	CG	LYS A 345	35.537	56.758	41.491	1.00	34.49		C
ATOM	2651	CD	LYS A 345	34.075	56.352	41.692	1.00	37.43		C
ATOM	2652	CE	LYS A 345	33.508	57.036	42.904	1.00	40.47		C
ATOM	2653	NZ	LYS A 345	34.223	56.522	44.138	1.00	46.19		N
ATOM	2654	N	GLY A 346	37.218	59.386	38.297	1.00	26.82		N
ATOM	2655	CA	GLY A 346	38.044	60.538	38.108	1.00	25.95		C
ATOM	2656	C	GLY A 346	39.314	60.175	37.392	1.00	25.08		C
ATOM	2657	O	GLY A 346	40.172	61.022	37.244	1.00	24.91		O
ATOM	2658	N	ARG A 347	39.419	58.935	36.944	1.00	24.84		N
ATOM	2659	CA	ARG A 347	40.647	58.436	36.347	1.00	25.30		C
ATOM	2660	C	ARG A 347	40.431	57.848	34.937	1.00	26.05		C
ATOM	2661	O	ARG A 347	41.138	58.196	34.007	1.00	24.59		O
ATOM	2662	CB	ARG A 347	41.279	57.395	37.272	1.00	25.27		C
ATOM	2663	CG	ARG A 347	41.716	57.934	38.696	1.00	24.21		C
ATOM	2664	CD	ARG A 347	43.159	57.506	39.082	1.00	25.10		C
ATOM	2665	NE	ARG A 347	43.175	56.084	39.017	1.00	24.49		N
ATOM	2666	CZ	ARG A 347	44.102	55.293	38.566	1.00	19.51		C
ATOM	2667	NH1	ARG A 347	45.299	55.692	38.195	1.00	21.86		N
ATOM	2668	NH2	ARG A 347	43.802	54.011	38.579	1.00	18.94		N
ATOM	2669	N	TYR A 348	39.438	56.991	34.794	1.00	27.91		N
ATOM	2670	CA	TYR A 348	39.119	56.380	33.507	1.00	29.80		C
ATOM	2671	C	TYR A 348	37.671	56.590	33.065	1.00	32.00		C
ATOM	2672	O	TYR A 348	37.309	56.173	31.964	1.00	32.29		O
ATOM	2673	CB	TYR A 348	39.379	54.877	33.543	1.00	28.38		C
ATOM	2674	CG	TYR A 348	40.836	54.498	33.597	1.00	27.86		C
ATOM	2675	CD1	TYR A 348	41.617	54.473	32.446	1.00	26.79		C
ATOM	2676	CD2	TYR A 348	41.422	54.124	34.787	1.00	25.32		C
ATOM	2677	CE1	TYR A 348	42.945	54.106	32.496	1.00	25.35		C
ATOM	2678	CE2	TYR A 348	42.734	53.762	34.847	1.00	27.07		C
ATOM	2679	CZ	TYR A 348	43.507	53.759	33.700	1.00	26.40		C
ATOM	2680	OH	TYR A 348	44.827	53.378	33.789	1.00	22.93		O
ATOM	2681	N	ASN A 349	36.824	57.193	33.894	1.00	34.78		N
ATOM	2682	CA	ASN A 349	35.426	57.360	33.473	1.00	37.16		C
ATOM	2683	C	ASN A 349	34.997	58.760	33.104	1.00	38.90		C
ATOM	2684	O	ASN A 349	35.690	59.756	33.136	1.00	38.66		O
ATOM	2685	CB	ASN A 349	34.474	56.837	34.493	1.00	36.69		C
ATOM	2686	CG	ASN A 349	34.480	57.633	35.727	1.00	39.34		C
ATOM	2687	OD1	ASN A 349	35.229	58.632	35.875	1.00	40.92		O
ATOM	2688	ND2	ASN A 349	33.654	57.188	36.684	1.00	42.73		N
ATOM	2689	OXT	ASN A 349	33.854	58.954	32.689	1.00	44.16		O
TER	2690		ASN A 349							
ATOM	2691	N	LEU S 795	45.870	35.442	31.163	1.00	49.68		N
ATOM	2692	CA	LEU S 795	44.790	36.472	31.262	1.00	49.90		C
ATOM	2693	C	LEU S 795	43.668	36.155	30.294	1.00	50.12		C
ATOM	2694	O	LEU S 795	42.492	36.182	30.666	1.00	49.41		O
ATOM	2695	CB	LEU S 795	45.331	37.873	31.004	1.00	50.09		C
ATOM	2696	CG	LEU S 795	44.774	38.924	31.976	1.00	50.19		C
ATOM	2697	CD1	LEU S 795	44.929	38.464	33.388	1.00	50.50		C
ATOM	2698	CD2	LEU S 795	45.436	40.280	31.876	1.00	51.23		C
ATOM	2699	N	THR S 796	44.041	35.979	29.033	1.00	50.69		N
ATOM	2700	CA	THR S 796	43.178	35.421	27.997	1.00	51.67		C
ATOM	2701	C	THR S 796	42.734	33.983	28.241	1.00	51.11		C
ATOM	2702	O	THR S 796	41.884	33.464	27.535	1.00	51.41		O
ATOM	2703	CB	THR S 796	43.888	35.547	26.626	1.00	51.86		C
ATOM	2704	OG1	THR S 796	43.253	34.704	25.671	1.00	56.26		O

ATOM	2705	CG2	THR	S	796	45.272	34.981	26.662	1.00	52.69	C
ATOM	2706	N	SER	S	797	43.261	33.330	29.248	1.00	51.51	N
ATOM	2707	CA	SER	S	797	42.838	31.965	29.497	1.00	52.74	C
ATOM	2708	C	SER	S	797	41.471	31.865	30.165	1.00	53.39	C
ATOM	2709	O	SER	S	797	41.070	32.733	30.934	1.00	52.91	O
ATOM	2710	CB	SER	S	797	43.850	31.247	30.351	1.00	52.86	C
ATOM	2711	OG	SER	S	797	43.687	31.623	31.697	1.00	55.21	O
ATOM	2712	N	TYR	S	798	40.783	30.761	29.904	1.00	54.79	N
ATOM	2713	CA	TYR	S	798	39.424	30.584	30.372	1.00	56.02	C
ATOM	2714	C	TYR	S	798	39.168	29.271	31.042	1.00	55.81	C
ATOM	2715	O	TYR	S	798	39.880	28.305	30.827	1.00	56.61	O
ATOM	2716	CB	TYR	S	798	38.437	30.747	29.214	1.00	56.97	C
ATOM	2717	CG	TYR	S	798	38.599	29.821	28.015	1.00	60.68	C
ATOM	2718	CD1	TYR	S	798	39.595	30.035	27.059	1.00	62.78	C
ATOM	2719	CD2	TYR	S	798	37.689	28.783	27.793	1.00	64.68	C
ATOM	2720	CE1	TYR	S	798	39.708	29.207	25.943	1.00	65.08	C
ATOM	2721	CE2	TYR	S	798	37.798	27.944	26.669	1.00	66.15	C
ATOM	2722	CZ	TYR	S	798	38.808	28.155	25.755	1.00	65.29	C
ATOM	2723	OH	TYR	S	798	38.902	27.335	24.652	1.00	64.08	O
ATOM	2724	N	ASP	S	799	38.117	29.240	31.843	1.00	55.66	N
ATOM	2725	CA	ASP	S	799	37.727	28.032	32.546	1.00	55.90	C
ATOM	2726	C	ASP	S	799	36.636	27.385	31.739	1.00	54.64	C
ATOM	2727	O	ASP	S	799	36.430	27.785	30.604	1.00	55.18	O
ATOM	2728	CB	ASP	S	799	37.212	28.367	33.948	1.00	56.52	C
ATOM	2729	CG·	ASP	S	799	37.366	27.225	34.906	1.00	57.36	C
ATOM	2730	OD1	ASP	S	799	36.749	26.147	34.720	1.00	57.64	O
ATOM	2731	OD2	ASP	S	799	38.108	27.331	35.881	1.00	62.28	O
ATOM	2732	N	CYS	S	800	35.915	26.428	32.326	1.00	53.45	N
ATOM	2733	CA	CYS	S	800	34.887	25.693	31.594	1.00	52.63	C
ATOM	2734	C	CYS	S	800	33.564	25.644	32.359	1.00	51.79	C
ATOM	2735	O	CYS	S	800	32.871	24.632	32.357	1.00	51.30	O
ATOM	2736	CB	CYS	S	800	35.372	24.282	31.327	1.00	52.47	C
ATOM	2737	SG	CYS	S	800	35.703	23.408	32.872	1.00	52.72	S
ATOM	2738	N	GLU	S	801	33.187	26.742	32.996	1.00	50.91	N
ATOM	2739	CA	GLU	S	801	31.939	26.732	33.762	1.00	50.65	C
ATOM	2740	C	GLU	S	801	30.657	26.939	32.909	1.00	50.18	C
ATOM	2741	O	GLU	S	801	30.617	27.687	31.928	1.00	48.39	O
ATOM	2742	CB	GLU	S	801	32.008	27.713	34.929	1.00	50.49	C
ATOM	2743	CG	GLU	S	801	33.199	27.450	35.853	1.00	51.78	C
ATOM	2744	CD	GLU	S	801	33.234	28.359	37.092	1.00	51.24	C
ATOM	2745	OE1	GLU	S	801	32.589	28.038	38.102	1.00	49.25	O
ATOM	2746	OE2	GLU	S	801	33.919	29.395	37.063	1.00	51.89	O
ATOM	2747	N	VAL	S	802	29.624	26.213	33.320	1.00	50.54	N
ATOM	2748	CA	VAL	S	802	28.338	26.161	32.650	1.00	50.71	C
ATOM	2749	C	VAL	S	802	27.213	26.094	33.694	1.00	51.25	C
ATOM	2750	O	VAL	S	802	27.464	25.960	34.885	1.00	50.69	O
ATOM	2751	CB	VAL	S	802	28.286	24.902	31.746	1.00	50.61	C
ATOM	2752	CG1	VAL	S	802	29.420	24.932	30.727	1.00	49.62	C
ATOM	2753	CG2	VAL	S	802	28.376	23.601	32.585	1.00	49.78	C
ATOM	2754	N	ASN	S	803	25.967	26.165	33.239	1.00	52.55	N
ATOM	2755	CA	ASN	S	803	24.816	26.099	34.140	1.00	53.28	C
ATOM	2756	C	ASN	S	803	24.516	24.663	34.561	1.00	54.95	C
ATOM	2757	O	ASN	S	803	23.440	24.150	34.298	1.00	54.22	O
ATOM	2758	CB	ASN	S	803	23.560	26.724	33.511	1.00	53.04	C
ATOM	2759	CG	ASN	S	803	23.546	28.245	33.569	1.00	51.60	C
ATOM	2760	OD1	ASN	S	803	24.576	28.895	33.755	1.00	51.13	O
ATOM	2761	ND2	ASN	S	803	22.367	28.817	33.406	1.00	46.28	N
ATOM	2762	N	ALA	S	804	25.498	24.033	35.201	1.00	57.29	N
ATOM	2763	CA	ALA	S	804	25.373	22.697	35.784	1.00	59.38	C
ATOM	2764	C	ALA	S	804	26.596	22.490	36.676	1.00	61.01	C
ATOM	2765	O	ALA	S	804	27.667	23.026	36.407	1.00	61.45	O

ATOM	2766	CB	ALA	S	804	25.315	21.603	34.716	1.00	59.47	C
ATOM	2767	N	PRO	S	805	26.438	21.707	37.732	1.00	62.94	N
ATOM	2768	CA	PRO	S	805	27.547	21.398	38.652	1.00	63.79	C
ATOM	2769	C	PRO	S	805	28.616	20.498	38.003	1.00	64.48	C
ATOM	2770	O	PRO	S	805	28.368	19.875	36.970	1.00	65.26	O
ATOM	2771	CB	PRO	S	805	26.851	20.654	39.807	1.00	63.79	C
ATOM	2772	CG	PRO	S	805	25.582	20.066	39.187	1.00	63.48	C
ATOM	2773	CD	PRO	S	805	25.175	21.035	38.107	1.00	63.26	C
ATOM	2774	N	ILE	S	806	29.779	20.405	38.630	1.00	65.18	N
ATOM	2775	CA	ILE	S	806	30.903	19.626	38.100	1.00	65.66	C
ATOM	2776	C	ILE	S	806	30.853	18.145	38.489	1.00	65.84	C
ATOM	2777	O	ILE	S	806	30.287	17.780	39.522	1.00	66.22	O
ATOM	2778	CB	ILE	S	806	32.239	20.255	38.582	1.00	65.91	C
ATOM	2779	CG1	ILE	S	806	32.435	20.046	40.089	1.00	65.62	C
ATOM	2780	CG2	ILE	S	806	32.267	21.765	38.255	1.00	66.46	C
ATOM	2781	CD1	ILE	S	806	33.719	20.639	40.611	1.00	65.48	C
ATOM	2782	N	LEU	S	813	29.912	8.313	36.265	1.00	60.30	N
ATOM	2783	CA	LEU	S	813	30.605	8.781	35.059	1.00	60.57	C
ATOM	2784	C	LEU	S	813	29.707	9.617	34.157	1.00	60.31	C
ATOM	2785	O	LEU	S	813	28.484	9.496	34.194	1.00	60.27	O
ATOM	2786	CB	LEU	S	813	31.167	7.599	34.266	1.00	60.46	C
ATOM	2787	CG	LEU	S	813	32.067	6.674	35.092	1.00	60.30	C
ATOM	2788	CD1	LEU	S	813	32.450	5.418	34.281	1.00	61.04	C
ATOM	2789	CD2	LEU	S	813	33.301	7.421	35.602	1.00	59.11	C
ATOM	2790	N	GLN	S	814	30.344	10.465	33.355	1.00	60.31	N
ATOM	2791	CA	GLN	S	814	29.648	11.353	32.440	1.00	60.05	C
ATOM	2792	C	GLN	S	814	30.557	11.803	31.295	1.00	59.62	C
ATOM	2793	O	GLN	S	814	31.765	11.584	31.322	1.00	58.97	O
ATOM	2794	CB	GLN	S	814	29.176	12.583	33.194	1.00	60.41	C
ATOM	2795	CG	GLN	S	814	30.302	13.488	33.634	1.00	62.13	C
ATOM	2796	CD	GLN	S	814	29.826	14.603	34.559	1.00	64.43	C
ATOM	2797	OE1	GLN	S	814	29.260	14.327	35.616	1.00	65.48	O
ATOM	2798	NE2	GLN	S	814	30.058	15.859	34.167	1.00	65.06	N
ATOM	2799	N	GLY	S	815	29.960	12.456	30.302	1.00	59.55	N
ATOM	2800	CA	GLY	S	815	30.675	12.927	29.136	1.00	59.21	C
ATOM	2801	C	GLY	S	815	31.493	11.823	28.493	1.00	59.26	C
ATOM	2802	O	GLY	S	815	31.049	10.678	28.399	1.00	58.48	O
ATOM	2803	N	GLU	S	816	32.693	12.183	28.049	1.00	59.73	N
ATOM	2804	CA	GLU	S	816	33.604	11.254	27.392	1.00	60.76	C
ATOM	2805	C	GLU	S	816	33.768	9.941	28.168	1.00	61.61	C
ATOM	2806	O	GLU	S	816	33.861	8.866	27.567	1.00	61.64	O
ATOM	2807	CB	GLU	S	816	34.978	11.913	27.190	1.00	60.71	C
ATOM	2808	CG	GLU	S	816	35.802	11.304	26.064	1.00	61.12	C
ATOM	2809	CD	GLU	S	816	37.208	11.872	25.979	1.00	61.35	C
ATOM	2810	OE1	GLU	S	816	38.066	11.370	26.730	1.00	61.67	O
ATOM	2811	OE2	GLU	S	816	37.467	12.801	25.168	1.00	60.68	O
ATOM	2812	N	GLU	S	817	33.791	10.030	29.495	1.00	62.56	N
ATOM	2813	CA	GLU	S	817	33.962	8.851	30.332	1.00	63.66	C
ATOM	2814	C	GLU	S	817	32.748	7.929	30.260	1.00	63.92	C
ATOM	2815	O	GLU	S	817	32.887	6.709	30.187	1.00	63.68	O
ATOM	2816	CB	GLU	S	817	34.217	9.257	31.777	1.00	63.99	C
ATOM	2817	CG	GLU	S	817	35.518	10.012	31.974	1.00	65.72	C
ATOM	2818	CD	GLU	S	817	35.371	11.514	31.786	1.00	69.17	C
ATOM	2819	OE1	GLU	S	817	34.253	11.990	31.452	1.00	70.86	O
ATOM	2820	OE2	GLU	S	817	36.384	12.228	31.984	1.00	71.76	O
ATOM	2821	N	LEU	S	818	31.558	8.517	30.296	1.00	64.38	N
ATOM	2822	CA	LEU	S	818	30.344	7.733	30.191	1.00	65.00	C
ATOM	2823	C	LEU	S	818	30.367	6.935	28.890	1.00	65.31	C
ATOM	2824	O	LEU	S	818	30.166	5.723	28.901	1.00	65.41	O
ATOM	2825	CB	LEU	S	818	29.092	8.624	30.232	1.00	64.90	C
ATOM	2826	CG	LEU	S	818	27.770	7.844	30.163	1.00	64.94	C

ATOM	2827	CD1	LEU	S	818	27.702	6.871	31.316	1.00 66.53	C
ATOM	2828	CD2	LEU	S	818	26.551	8.718	30.205	1.00 63.99	C
ATOM	2829	N	LEU	S	819	30.647	7.627	27.787	1.00 65.71	N
ATOM	2830	CA	LEU	S	819	30.608	7.037	26.445	1.00 66.10	C
ATOM	2831	C	LEU	S	819	31.569	5.851	26.294	1.00 66.37	C
ATOM	2832	O	LEU	S	819	31.174	4.773	25.852	1.00 65.86	O
ATOM	2833	CB	LEU	S	819	30.901	8.122	25.392	1.00 66.04	C
ATOM	2834	CG	LEU	S	819	30.860	7.737	23.916	1.00 66.00	C
ATOM	2835	CD1	LEU	S	819	29.537	7.149	23.501	1.00 66.14	C
ATOM	2836	CD2	LEU	S	819	31.162	8.967	23.083	1.00 67.31	C
ATOM	2837	N	ARG	S	820	32.820	6.053	26.684	1.00 66.68	N
ATOM	2838	CA	ARG	S	820	33.824	5.013	26.561	1.00 67.34	C
ATOM	2839	C	ARG	S	820	33.492	3.801	27.432	1.00 67.41	C
ATOM	2840	O	ARG	S	820	33.573	2.643	26.969	1.00 67.19	O
ATOM	2841	CB	ARG	S	820	35.196	5.574	26.917	1.00 67.66	C
ATOM	2842	CG	ARG	S	820	35.628	6.605	25.907	1.00 69.12	C
ATOM	2843	CD	ARG	S	820	37.048	7.061	26.030	1.00 71.00	C
ATOM	2844	NE	ARG	S	820	37.309	8.138	25.079	1.00 73.46	N
ATOM	2845	CZ	ARG	S	820	38.442	8.839	25.014	1.00 75.31	C
ATOM	2846	NH1	ARG	S	820	39.451	8.581	25.851	1.00 75.90	N
ATOM	2847	NH2	ARG	S	820	38.566	9.806	24.104	1.00 75.55	N
ATOM	2848	N	ALA	S	821	33.118	4.067	28.684	1.00 67.11	N
ATOM	2849	CA	ALA	S	821	32.712	2.999	29.580	1.00 66.99	C
ATOM	2850	C	ALA	S	821	31.609	2.171	28.898	1.00 66.76	C
ATOM	2851	O	ALA	S	821	31.660	0.945	28.889	1.00 66.63	O
ATOM	2852	CB	ALA	S	821	32.234	3.562	30.901	1.00 66.88	C
ATOM	2853	N	LEU	S	822	30.625	2.851	28.313	1.00 66.58	N
ATOM	2854	CA	LEU	S	822	29.538	2.173	27.607	1.00 66.36	C
ATOM	2855	C	LEU	S	822	30.027	1.439	26.359	1.00 66.21	C
ATOM	2856	O	LEU	S	822	29.429	0.444	25.956	1.00 66.11	O
ATOM	2857	CB	LEU	S	822	28.451	3.172	27.223	1.00 66.06	C
ATOM	2858	CG	LEU	S	822	27.710	3.789	28.406	1.00 65.45	C
ATOM	2859	CD1	LEU	S	822	26.559	4.613	27.885	1.00 65.37	C
ATOM	2860	CD2	LEU	S	822	27.213	2.732	29.396	1.00 65.08	C
TER	2861		LEU	S	822					
HETATM	2862	ZN	ZN	A	1350	23.324	27.578	28.817	1.00 32.29	ZN
HETATM	2863	C1	OGA	A	1351	22.262	25.308	27.891	1.00 34.79	C
HETATM	2864	C2	OGA	A	1351	21.209	25.940	28.487	1.00 32.90	C
HETATM	2865	C4	OGA	A	1351	18.882	25.730	29.253	1.00 32.24	C
HETATM	2866	C5	OGA	A	1351	17.543	25.251	28.735	1.00 32.20	C
HETATM	2867	O1	OGA	A	1351	22.091	24.207	27.399	1.00 33.47	O
HETATM	2868	O2	OGA	A	1351	23.404	25.817	27.813	1.00 33.83	O
HETATM	2869	O2'	OGA	A	1351	21.299	27.077	29.004	1.00 31.02	O
HETATM	2870	O3	OGA	A	1351	17.430	24.476	27.795	1.00 33.67	O
HETATM	2871	N1	OGA	A	1351	20.067	25.271	28.520	1.00 29.83	N
HETATM	2872	O4	OGA	A	1351	16.551	25.641	29.307	1.00 32.21	O
HETATM	2873	S	SO4	A	1352	0.290	25.194	43.827	1.00 90.02	S
HETATM	2874	O1	SO4	A	1352	1.120	26.025	44.689	1.00 89.95	O
HETATM	2875	O2	SO4	A	1352	1.151	24.261	43.106	1.00 88.91	O
HETATM	2876	O3	SO4	A	1352	-0.627	24.447	44.672	1.00 90.38	O
HETATM	2877	O4	SO4	A	1352	-0.468	26.028	42.891	1.00 89.30	O
HETATM	2878	S	SO4	A	1353	1.893	28.515	29.870	1.00 98.62	S
HETATM	2879	O1	SO4	A	1353	3.138	29.102	30.350	1.00 97.69	O
HETATM	2880	O2	SO4	A	1353	2.145	27.399	28.947	1.00 97.91	O
HETATM	2881	O3	SO4	A	1353	1.205	28.059	31.078	1.00 99.26	O
HETATM	2882	O4	SO4	A	1353	1.078	29.515	29.171	1.00 98.46	O
HETATM	2883	O	HOH	H	1	38.820	33.858	31.965	1.00 46.43	O
HETATM	2884	O	HOH	H	2	33.795	30.509	39.255	1.00 71.93	O
HETATM	2885	O	HOH	H	3	34.891	30.536	35.372	1.00 48.26	O
HETATM	2886	O	HOH	H	4	35.615	13.844	24.220	1.00 48.67	O
HETATM	2887	O	HOH	Z	1	11.592	21.463	13.878	1.00 49.06	O

HETATM	2888	O	HOH	Z	2	9.700	21.662	12.247	1.00	70.56	O
HETATM	2889	O	HOH	Z	3	1.136	21.407	7.962	1.00	66.59	O
HETATM	2890	O	HOH	Z	4	2.407	19.370	5.351	1.00	60.28	O
HETATM	2891	O	HOH	Z	5	1.014	29.292	13.196	1.00	61.25	O
HETATM	2892	O	HOH	Z	6	2.256	32.365	14.166	1.00	73.91	O
HETATM	2893	O	HOH	Z	7	11.526	44.954	15.330	1.00	68.94	O
HETATM	2894	O	HOH	Z	8	-1.438	30.257	22.663	1.00	85.46	O
HETATM	2895	O	HOH	Z	9	7.738	30.579	27.736	1.00	46.83	O
HETATM	2896	O	HOH	Z	10	3.543	32.597	32.323	1.00	73.21	O
HETATM	2897	O	HOH	Z	11	6.618	43.722	26.114	1.00	79.20	O
HETATM	2898	O	HOH	Z	12	4.723	37.184	27.600	1.00	69.48	O
HETATM	2899	O	HOH	Z	13	10.942	35.610	30.382	1.00	48.93	O
HETATM	2900	O	HOH	Z	14	13.888	48.615	19.570	1.00	55.60	O
HETATM	2901	O	HOH	Z	15	12.153	41.664	15.818	1.00	61.09	O
HETATM	2902	O	HOH	Z	16	15.898	30.602	12.921	1.00	48.84	O
HETATM	2903	O	HOH	Z	17	13.629	22.042	7.314	1.00	56.45	O
HETATM	2904	O	HOH	Z	18	14.608	26.242	13.702	1.00	55.84	O
HETATM	2905	O	HOH	Z	19	21.110	23.978	3.732	1.00	49.91	O
HETATM	2906	O	HOH	Z	20	22.517	24.246	0.061	1.00	58.70	O
HETATM	2907	O	HOH	Z	21	27.322	30.745	5.813	1.00	71.25	O
HETATM	2908	O	HOH	Z	22	26.669	21.831	43.291	1.00	84.79	O
HETATM	2909	O	HOH	Z	23	36.928	29.423	21.116	1.00	60.53	O
HETATM	2910	O	HOH	Z	24	28.560	37.933	15.396	1.00	65.84	O
HETATM	2911	O	HOH	Z	25	29.717	37.018	10.091	1.00	70.57	O
HETATM	2912	O	HOH	Z	26	19.889	17.921	13.411	1.00	40.68	O
HETATM	2913	O	HOH	Z	27	18.190	15.068	13.047	1.00	45.64	O
HETATM	2914	O	HOH	Z	28	19.229	14.479	16.581	1.00	44.23	O
HETATM	2915	O	HOH	Z	29	5.509	12.781	28.209	1.00	48.58	O
HETATM	2916	O	HOH	Z	30	19.118	6.397	36.829	1.00	62.79	O
HETATM	2917	O	HOH	Z	31	33.446	44.026	25.377	1.00	68.72	O
HETATM	2918	O	HOH	Z	32	8.427	26.875	44.426	1.00	65.85	O
HETATM	2919	O	HOH	Z	33	9.122	31.413	42.815	1.00	79.14	O
HETATM	2920	O	HOH	Z	34	15.645	37.855	35.686	1.00	55.81	O
HETATM	2921	O	HOH	Z	35	16.264	30.912	40.283	1.00	52.67	O
HETATM	2922	O	HOH	Z	36	28.580	24.804	42.231	1.00	71.47	O
HETATM	2923	O	HOH	Z	37	25.125	24.702	42.513	1.00	61.76	O
HETATM	2924	O	HOH	Z	38	31.710	33.903	46.336	1.00	58.86	O
HETATM	2925	O	HOH	Z	39	24.430	38.695	49.842	1.00	64.87	O
HETATM	2926	O	HOH	Z	40	21.999	17.349	48.274	1.00	78.90	O
HETATM	2927	O	HOH	Z	41	22.174	10.277	34.700	1.00	61.90	O
HETATM	2928	O	HOH	Z	42	17.917	-1.798	33.038	1.00	69.51	O
HETATM	2929	O	HOH	Z	43	36.654	10.887	7.525	1.00	72.57	O
HETATM	2930	O	HOH	Z	44	13.628	20.833	28.536	1.00	46.20	O
HETATM	2931	O	HOH	Z	45	3.910	21.434	31.018	1.00	60.17	O
HETATM	2932	O	HOH	Z	46	30.778	38.131	33.414	1.00	33.59	O
HETATM	2933	O	HOH	Z	47	25.976	26.458	26.213	1.00	38.20	O
HETATM	2934	O	HOH	Z	48	35.876	25.491	27.760	1.00	47.36	O
HETATM	2935	O	HOH	Z	49	36.704	26.679	21.111	1.00	49.53	O
HETATM	2936	O	HOH	Z	50	17.375	16.970	18.001	1.00	37.06	O
HETATM	2937	O	HOH	Z	51	5.442	16.762	21.954	1.00	48.45	O
HETATM	2938	O	HOH	Z	52	6.786	12.615	22.641	1.00	71.97	O
HETATM	2939	O	HOH	Z	53	7.201	17.017	20.359	1.00	48.19	O
HETATM	2940	O	HOH	Z	54	6.512	22.748	23.330	1.00	52.43	O
HETATM	2941	O	HOH	Z	55	29.528	38.794	26.547	1.00	33.74	O
HETATM	2942	O	HOH	Z	56	30.683	39.271	19.412	1.00	42.04	O
HETATM	2943	O	HOH	Z	57	26.571	42.213	18.009	1.00	59.45	O
HETATM	2944	O	HOH	Z	58	29.038	40.259	16.007	1.00	65.33	O
HETATM	2945	O	HOH	Z	59	27.631	44.557	31.407	1.00	36.71	O
HETATM	2946	O	HOH	Z	60	27.654	48.738	30.067	1.00	46.82	O
HETATM	2947	O	HOH	Z	61	30.426	45.052	25.424	1.00	49.55	O
HETATM	2948	O	HOH	Z	62	25.946	50.745	30.903	1.00	51.76	O

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HETATM 2949  O    HOH Z  63      26.759  31.212  38.332  1.00 39.21           O
HETATM 2950  O    HOH Z  64      29.563  36.988  35.538  1.00 36.58           O
HETATM 2951  O    HOH Z  65      30.608  30.268  36.508  1.00 39.97           O
HETATM 2952  O    HOH Z  66      19.823  31.620  33.966  1.00 44.64           O
HETATM 2953  O    HOH Z  67      19.517  36.182  33.531  1.00 39.38           O
HETATM 2954  O    HOH Z  68      18.255  38.678  36.813  1.00 57.99           O
HETATM 2955  O    HOH Z  69      21.026  42.838  40.240  1.00 56.11           O
HETATM 2956  O    HOH Z  70      17.610  37.832  32.310  1.00 47.08           O
HETATM 2957  O    HOH Z  71      15.109  37.973  32.827  1.00 45.82           O
HETATM 2958  O    HOH Z  72      16.418  47.375  39.219  1.00 67.81           O
HETATM 2959  O    HOH Z  73      15.605  44.895  35.040  1.00 43.78           O
HETATM 2960  O    HOH Z  74      15.286  55.715  27.660  1.00 67.46           O
HETATM 2961  O    HOH Z  75      15.476  50.403  22.363  1.00 44.42           O
HETATM 2962  O    HOH Z  76      16.645  46.682  22.198  1.00 39.25           O
HETATM 2963  O    HOH Z  77      26.589  40.795  15.622  1.00 68.21           O
HETATM 2964  O    HOH Z  78      10.674  19.290  14.058  1.00 55.87           O
HETATM 2965  O    HOH Z  79      27.773  27.556  24.476  1.00 37.12           O
HETATM 2966  O    HOH Z  80      30.214  36.062  27.011  1.00 40.11           O
HETATM 2967  O    HOH Z  81      32.661  34.179  19.369  1.00 54.04           O
HETATM 2968  O    HOH Z  82      27.339  30.221  25.948  1.00 38.07           O
HETATM 2969  O    HOH Z  83      16.261  36.239  29.815  1.00 43.65           O
HETATM 2970  O    HOH Z  84       6.400  23.973  25.697  1.00 45.37           O
HETATM 2971  O    HOH Z  85       4.061  20.777  20.758  1.00 74.60           O
HETATM 2972  O    HOH Z  86      42.841  37.277  18.598  1.00 67.00           O
HETATM 2973  O    HOH Z  87      42.456  44.259  19.547  1.00 64.85           O
HETATM 2974  O    HOH Z  88      33.750  36.936  20.231  1.00 46.70           O
HETATM 2975  O    HOH Z  89      33.208  39.305  33.829  1.00 37.00           O
HETATM 2976  O    HOH Z  90      32.098  40.251  44.432  1.00 46.81           O
HETATM 2977  O    HOH Z  91      32.904  43.762  45.581  1.00 58.90           O
HETATM 2978  O    HOH Z  92      39.242  57.294  42.204  1.00 36.08           O
HETATM 2979  O    HOH Z  93      46.926  53.378  32.000  1.00 42.91           O
HETATM 2980  O    HOH Z  94      37.922  55.476  29.664  1.00 46.42           O
HETATM 2981  O    HOH Z  95      38.489  59.800  33.014  1.00 55.47           O
CONECT 1478 2862
CONECT 1498 2862
CONECT 2167 2862
CONECT 2862 2869 2868 1478 2167 1498
CONECT 2863 2864 2867 2868
CONECT 2864 2863 2869 2871
CONECT 2865 2866 2871
CONECT 2866 2865 2870 2872
CONECT 2867 2863
CONECT 2868 2863 2862
CONECT 2869 2864 2862
CONECT 2870 2866
CONECT 2871 2864 2865
CONECT 2872 2866
CONECT 2873 2874 2875 2876 2877
CONECT 2874 2873
CONECT 2875 2873
CONECT 2876 2873
CONECT 2877 2873
CONECT 2878 2879 2880 2881 2882
CONECT 2879 2878
CONECT 2880 2878
CONECT 2881 2878
CONECT 2882 2878
MASTER      446    0    4   15   20    0    8    6 2979    2   24   31
END
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Structure 4

Below are the coordinates for structure 4 (the 2.85 Å structure of FIH:Fe(II):2OG):

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HEADER      TRANSCRIPTION ACTIVATOR/INHIBITOR       12-AUG-02   1H2N
TITLE       FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX WITH HIF-1 ALPHA
TITLE     2 FRAGMENT PEPTIDE
COMPND      MOL_ID: 1;
COMPND    2 MOLECULE: FACTOR INHIBITING HIF1;
COMPND    3 SYNONYM: FIH1;
COMPND    4 CHAIN: A;
COMPND    5 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE    2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE    3 ORGANISM_COMMON: HUMAN;
SOURCE    4 EXPRESSION_SYSTEM: ESCHERICHIA COLI;
SOURCE    5 EXPRESSION_SYSTEM_STRAIN: BL21(DE3);
SOURCE    6 EXPRESSION_SYSTEM_PLASMID: PET28A(+)
KEYWDS      FIH, HIF, DSBH, OXYGENASE, TRANSCRIPTION, HYPOXIA,
KEYWDS    2 2-OXOGLUTARATE, ASPARAGINYL HYDROXYLASE, HYDROXYLASE
EXPDTA      X-RAY DIFFRACTION
AUTHOR      J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,I.SCHLEMMINGER,
AUTHOR    2 J.F.SEIBEL,C.J.SCHOFIELD
REVDAT    1   04-SEP-02 1H2N    0
JRNL        AUTH   J.M.ELKINS,K.S.HEWITSON,L.A.MCNEILL,
JRNL        AUTH 2 I.SCHLEMMINGER,J.F.SEIBEL,C.J.SCHOFIELD
JRNL        TITL   FIH:HIF-FRAGMENT COMPLEXES
JRNL        REF    TO BE PUBLISHED
JRNL        REFN
REMARK    2
REMARK    2 RESOLUTION. 2.84 ANGSTROMS.
REMARK    3
REMARK    3 REFINEMENT.
REMARK    3   PROGRAM     : REFMAC 5.0
REMARK    3   AUTHORS     : MURSHUDOV,VAGIN,DODSON
REMARK    3
REMARK    3   REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK    3
REMARK    3 DATA USED IN REFINEMENT.
REMARK    3   RESOLUTION RANGE HIGH (ANGSTROMS) :   2.84
REMARK    3   RESOLUTION RANGE LOW  (ANGSTROMS) :  30.00
REMARK    3   DATA CUTOFF            (SIGMA(F)) : NONE
REMARK    3   COMPLETENESS FOR RANGE        (%) :  99.51
REMARK    3   NUMBER OF REFLECTIONS             :   12577
REMARK    3
REMARK    3 FIT TO DATA USED IN REFINEMENT.
REMARK    3   CROSS-VALIDATION METHOD          : THROUGHOUT
REMARK    3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK    3   R VALUE       (WORKING + TEST SET) : 0.23287
REMARK    3   R VALUE             (WORKING SET) :  0.23094
REMARK    3   FREE R VALUE                     :  0.25695
REMARK    3   FREE R VALUE TEST SET SIZE   (%) :  7.7
REMARK    3   FREE R VALUE TEST SET COUNT      :  1046
REMARK    3
REMARK    3 FIT IN THE HIGHEST RESOLUTION BIN.
REMARK    3   TOTAL NUMBER OF BINS USED         :      20
REMARK    3   BIN RESOLUTION RANGE HIGH         :    2.840
REMARK    3   BIN RESOLUTION RANGE LOW          :    2.913
REMARK    3   REFLECTION IN BIN     (WORKING SET) :      828
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REMARK   3   BIN R VALUE            (WORKING SET) :    0.286
REMARK   3   BIN FREE R VALUE SET COUNT          :       81
REMARK   3   BIN FREE R VALUE        .            :    0.315
REMARK   3
REMARK   3   NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3    PROTEIN ATOMS              : 2689
REMARK   3    NUCLEIC ACID ATOMS         : 0
REMARK   3    HETEROGEN ATOMS            : 26
REMARK   3    SOLVENT ATOMS              : 3
REMARK   3
REMARK   3   B VALUES.
REMARK   3    FROM WILSON PLOT           (A**2) : NULL
REMARK   3    MEAN B VALUE      (OVERALL, A**2) :  35.345
REMARK   3  · OVERALL ANISOTROPIC B VALUE.
REMARK   3     B11 (A**2) :·    -1.02
REMARK   3     B22 (A**2) :     -1.02
REMARK   3  ·  B33 (A**2) :      2.03
REMARK   3     B12 (A**2) :      0.00
REMARK   3     B13 (A**2) :      0.00
REMARK   3     B23 (A**2) :      0.00
REMARK   3
REMARK   3   ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3    ESU BASED ON R VALUE                        (A):   0.852
REMARK   3    ESU BASED ON FREE R VALUE                   (A):   0.349
REMARK   3    ESU BASED ON MAXIMUM LIKELIHOOD             (A):   0.398
REMARK   3    ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 19.679
REMARK   3
REMARK   3  CORRELATION COEFFICIENTS.
REMARK   3    CORRELATION COEFFICIENT FO-FC      :   0.913
REMARK   3    CORRELATION COEFFICIENT FO-FC FREE :   0.901
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES          COUNT    RMS     WEIGHT
REMARK   3   BOND LENGTHS REFINED ATOMS        (A):  2791 ; 0.015 ; 0.021
REMARK   3   BOND LENGTHS OTHERS               (A):  2388 ; 0.001 ; 0.020
REMARK   3   BOND ANGLES REFINED ATOMS    (DEGREES):  3799 ; 1.628 ; 1.945
REMARK   3   BOND ANGLES OTHERS           (DEGREES):  5576 ; 0.823 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1     (DEGREES):   330 ; 4.268 ; 3.000
REMARK   3   TORSION ANGLES; PERIOD 3     (DEGREES):   479 ;18.082 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS       (A**3):   384 ; 0.095 ; 0.200
REMARK  ·3   GENERAL PLANES REFINED ATOMS     (A):  3137 ; 0.005 ; 0.020
REMARK   3   GENERAL PLANES OTHERS            (A):   575 ; 0.002 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED ATOMS (A):   717 ; 0.255 ; 0.300
REMARK   3   NON-BONDED CONTACTS OTHERS       (A):  2425 ; 0.224 ; 0.300
REMARK  ·3   H-BOND (X...Y) REFINED ATOMS     (A):   165 ; 0.139 ; 0.500
REMARK   3   H-BOND (X...Y) OTHERS ·          (A):     1 ; 0.102 ; 0.500
REMARK   3   POTENTIAL METAL-ION REFINED ATOMS (A):     3 ; 0.112 ; 0.500
REMARK   3   SYMMETRY VDW·REFINED ATOMS       (A):    14 ; 0.256 ; 0.300
REMARK   3   SYMMETRY VDW OTHERS              (A):    62 ; 0.273 ; 0.300
REMARK   3   SYMMETRY H-BOND REFINED ATOMS    (A):     4 ; 0.214 ; 0.500
REMARK   3   SYMMETRY H-BOND OTHERS           (A):     1 ; 0.061 ; 0.500
REMARK   3        .
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.   COUNT    RMS     WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED ATOMS   (A**2): 1659 ; 0.312 ; 1.500
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS  (A**2): 2675 ; 0.598 ; 2.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS   (A**2): 1132 ; 1.058 ; 3.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS  (A**2): 1124 ; 1.795 ; 4.500
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3  TLS DETAILS
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REMARK   3    NUMBER OF TLS GROUPS  :    1
REMARK   3
REMARK   3    TLS GROUP :     1
REMARK   3     NUMBER OF COMPONENTS GROUP :    1
REMARK   3     COMPONENTS          C SSSEQI    TO  C SSSEQI
REMARK   3     RESIDUE RANGE :    A    15        A    452
REMARK   3     ORIGIN FOR THE GROUP (A):  21.4490  27.4200  27.7870
REMARK   3     T TENSOR
REMARK   3       T11:   0.2230 T22:    0.0562
REMARK   3       T33:   0.0967 T12:    0.0111
REMARK   3       T13:  -0.0923 T23:    0.0525
REMARK   3     L TENSOR
REMARK   3       L11:   1.6842 L22:    4.4489
REMARK   3       L33:   2.0658 L12:    1.5597
REMARK   3       L13:   1.1572 L23:    2.3523
REMARK   3     S TENSOR
REMARK   3       S11:   0.1098 S12:   -0.2106 S13:  -0.0766
REMARK   3       S21:   0.3449 S22:   -0.0455 S23:   0.2455
REMARK   3       S31:   0.3515 S32:   -0.1199 S33:  -0.0643
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED.: BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS    :    1.40
REMARK   3   ION PROBE RADIUS    :    0.80
REMARK   3   SHRINKAGE RADIUS    :    0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS: SEE REMARK 400
REMARK   4
REMARK   4 1H2N COMPLIES WITH FORMAT V. 2.3, 09-JULY-1998
REMARK 100
REMARK 100 THIS ENTRY HAS BEEN PROCESSED BY EBI  ON 12-AUG-2002.
REMARK 100 THE EBI ID CODE IS EBI-11174.
REMARK 200
REMARK 200 EXPERIMENTAL DETAILS
REMARK 200  EXPERIMENT TYPE                : X-RAY DIFFRACTION
REMARK 200  DATE OF DATA COLLECTION        : 15-MAY-2002
REMARK 200  TEMPERATURE          (KELVIN) : 100
REMARK 200  PH                             : 7.5
REMARK 200  NUMBER OF CRYSTALS USED        : 1
REMARK 200
REMARK 200  SYNCHROTRON              (Y/N) : Y
REMARK 200  RADIATION SOURCE               : SRS BEAMLINE PX9.5
REMARK 200  BEAMLINE                       : PX9.5
REMARK 200  X-RAY GENERATOR MODEL          : NULL
REMARK 200  MONOCHROMATIC OR LAUE    (M/L) : M
REMARK 200  WAVELENGTH OR RANGE       (A) : 0.92
REMARK 200  MONOCHROMATOR                  : NULL
REMARK 200  OPTICS                         : NULL
REMARK 200
REMARK 200  DETECTOR TYPE                  : MARCCD
REMARK 200  DETECTOR MANUFACTURER          : MARRESEARCH
REMARK 200  INTENSITY-INTEGRATION SOFTWARE : MOSFLM
REMARK 200  DATA SCALING SOFTWARE          : SCALA
REMARK 200
REMARK 200  NUMBER OF UNIQUE REFLECTIONS   : 13703
REMARK 200  RESOLUTION RANGE HIGH     (A) : 2.84
REMARK 200  RESOLUTION RANGE LOW      (A) : 34.1
REMARK 200  REJECTION CRITERIA  (SIGMA(I)) : NONE
REMARK 200
REMARK 200 OVERALL.
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REMARK 200  COMPLETENESS FOR RANGE      (%) : 99.2
REMARK 200  DATA REDUNDANCY                 : 6.7
REMARK 200  R MERGE                     (I) : 0.067
REMARK 200  R SYM                       (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR THE DATA SET   : 9.4
REMARK 200
REMARK 200 IN THE HIGHEST RESOLUTION SHELL.
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE HIGH (A) : 2.84
REMARK 200  HIGHEST RESOLUTION SHELL, RANGE LOW  (A) : 2.99
REMARK 200  COMPLETENESS FOR SHELL      (%) : 94.9
REMARK 200  DATA REDUNDANCY IN SHELL        : 5.2
REMARK 200  R MERGE FOR SHELL           (I) : 0.309
REMARK 200  R SYM FOR SHELL             (I) : NULL
REMARK 200  <I/SIGMA(I)> FOR SHELL          : 2.4
REMARK 200
REMARK 200 DIFFRACTION PROTOCOL: SINGLE WAVELENGTH
REMARK 200 METHOD USED TO DETERMINE THE STRUCTURE: MOLECULAR REPLACEMENT
REMARK 200 SOFTWARE USED: NULL
REMARK 200 STARTING MODEL: NULL
REMARK 200
REMARK 200 REMARK: SEE REMARK 400
REMARK 280
REMARK 280 CRYSTAL
REMARK 280 SOLVENT CONTENT, VS  (%): 63
REMARK 280 MATTHEWS COEFFICIENT, VM (ANGSTROMS**3/DA): 3.4
REMARK 280
REMARK 280 CRYSTALLIZATION CONDITIONS: 1.2M AMMONIUM SULPHATE,
REMARK 280  4% PEG400, 0.1M HEPES PH7.5 ARGON ATMOSPHERE,
REMARK 280  11MG/ML PROTEIN WITH 1MM FE(II), 2.5MM AKG AND 2.5MM
REMARK 280  PEPTIDE (SEE REMARK 400)
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY
REMARK 290 SYMMETRY OPERATORS FOR SPACE GROUP: P 41 21 2
REMARK 290
REMARK 290     SYMOP   SYMMETRY
REMARK 290     NNNMMM  OPERATOR
REMARK 290     1555    X,Y,Z
REMARK 290     2555    -X,-Y,1/2+Z
REMARK 290     3555    1/2-Y,1/2+X,1/4+Z
REMARK 290     4555    1/2+Y,1/2-X,3/4+Z
REMARK 290     5555    1/2-X,1/2+Y,1/4-Z
REMARK 290     6555    1/2+X,1/2-Y,3/4-Z
REMARK 290     7555    Y,X,-Z
REMARK 290     8555    -Y,-X,1/2-Z
REMARK 290
REMARK 290     WHERE NNN -> OPERATOR NUMBER
REMARK 290           MMM -> TRANSLATION VECTOR
REMARK 290
REMARK 290 CRYSTALLOGRAPHIC SYMMETRY TRANSFORMATIONS
REMARK 290 THE FOLLOWING TRANSFORMATIONS OPERATE ON THE ATOM/HETATM
REMARK 290 RECORDS IN THIS ENTRY TO PRODUCE CRYSTALLOGRAPHICALLY
REMARK 290 RELATED MOLECULES.
REMARK 290     SMTRY1   1  1.000000  0.000000  0.000000      0.00000
REMARK 290     SMTRY2   1  0.000000  1.000000  0.000000      0.00000
REMARK 290     SMTRY3   1  0.000000  0.000000  1.000000      0.00000
REMARK 290     SMTRY1   2 -1.000000  0.000000  0.000000      0.00000
REMARK 290     SMTRY2   2  0.000000 -1.000000  0.000000      0.00000
REMARK 290     SMTRY3   2  0.000000  0.000000  1.000000     73.36600
REMARK 290     SMTRY1   3  0.000000 -1.000000  0.000000     43.17100
REMARK 290     SMTRY2   3  1.000000  0.000000  0.000000     43.17100
REMARK 290     SMTRY3   3  0.000000  0.000000  1.000000     36.68300
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REMARK 290   SMTRY1   4   0.000000   1.000000   0.000000      43.17100
REMARK 290   SMTRY2   4  -1.000000   0.000000   0.000000      43.17100
REMARK 290   SMTRY3   4   0.000000   0.000000   1.000000     110.04900
REMARK 290   SMTRY1   5  -1.000000   0.000000   0.000000      43.17100
REMARK 290   SMTRY2   5   0.000000   1.000000   0.000000      43.17100
REMARK 290   SMTRY3   5   0.000000   0.000000  -1.000000      36.68300
REMARK 290   SMTRY1   6   1.000000   0.000000   0.000000      43.17100
REMARK 290  ·SMTRY2   6   0.000000  -1.000000   0.000000      43.17100
REMARK 290   SMTRY3   6   0.000000   0.000000  -1.000000     110.04900
REMARK 290   SMTRY1   7   0.000000   1.000000   0.000000       0.00000
REMARK 290   SMTRY2   7   1.000000   0.000000   0.000000       0.00000
REMARK 290   SMTRY3   7   0.000000   0.000000  -1.000000       0.00000
REMARK 290   SMTRY1   8   0.000000  -1.000000   0.000000       0.00000
REMARK 290   SMTRY2   8  -1.000000   0.000000   0.000000       0.00000
REMARK 290   SMTRY3   8   0.000000   0.000000  -1.000000      73.36600
REMARK 290
REMARK 290 REMARK: NULL
REMARK 300
REMARK 300 BIOMOLECULE: 1
REMARK 300 THIS ENTRY CONTAINS THE CRYSTALLOGRAPHIC ASYMMETRIC UNIT
REMARK 300 WHICH CONSISTS OF   2 CHAIN(S). SEE REMARK 350 FOR
REMARK 300 INFORMATION ON GENERATING THE BIOLOGICAL MOLECULE(S).
REMARK 300
REMARK 300 QUATERNARY STRUCTURE FOR THIS ENTRY: DIMERIC
REMARK 300
REMARK 300 THE PROTEIN IS A HOMODIMER FORMED BY CHAIN A.
REMARK 300
REMARK 300 FOR THE HOMO-ASSEMBLY DESCRIBED BY REMARK 350
REMARK 300 THE DIFFERENCE IN ACCESSIBLE SURFACE AREA PER
REMARK 300 CHAIN BETWEEN THE ISOLATED CHAIN AND THAT FOR
REMARK 300 THE CHAIN IN THE COMPLEX IS  1600.4 ANGSTROM**2
REMARK 350
REMARK 350 GENERATING THE BIOMOLECULE
REMARK 350 COORDINATES FOR A COMPLETE MULTIMER REPRESENTING THE KNOWN
REMARK 350 BIOLOGICALLY SIGNIFICANT OLIGOMERIZATION STATE OF THE
REMARK 350 MOLECULE CAN BE GENERATED BY APPLYING BIOMT TRANSFORMATIONS
REMARK 350 GIVEN BELOW.  BOTH NON-CRYSTALLOGRAPHIC AND
REMARK 350 CRYSTALLOGRAPHIC OPERATIONS ARE GIVEN.
REMARK 350
REMARK 350 BIOMOLECULE:   1
REMARK 350 APPLY THE FOLLOWING TO CHAINS: A
REMARK 350    BIOMT1   1   1.000000   0.000000   0.000000       0.00000
REMARK 350    BIOMT2   1   0.000000   1.000000   0.000000       0.00000
REMARK 350    BIOMT3   1   0.000000   0.000000   1.000000       0.00000
REMARK 350    BIOMT1   2   0.000000  -1.000000   0.000000      86.34200
REMARK 350    BIOMT2   2  -1.000000   0.000000   0.000000      86.34200
REMARK 350    BIOMT3   2   0.000000   0.000000  -1.000000      73.36600
REMARK 400
REMARK 400 COMPOUND
REMARK 400
REMARK 400   THE PROTEIN (CHAIN A) WAS CRYSTALLIZED IN THE PRESENCE
REMARK 400   OF A PEPTIDE FRAGMENT FROM ENDOTHELIAL PAS DOMAIN PROTEIN 1
REMARK 400   SWISS-PROT ID Q99814 (RESIDUES 846-858) BUT NONE OF THE
REMARK 400   RESIDUES CORRESPONDING TO THE PEPTIDE WERE VISIBLE IN THE
REMARK 400   ELECTRON DENSITY MAPS. IT IS POSSIBLE THAT THE PEPTIDE DID
REMARK 400   NOT BIND TO THE PROTEIN AND HENCE HAS NOT BEEN INCLUDED IN THE
REMARK 400   COMPND, SOURCE AND SEQRES RECORDS.
REMARK 400
REMARK 400   THE SEQUENCE OF THE FRAGMENT IS GIVEN BELOW.
REMARK 400
REMARK 400   VAL ASN VAL PRO VAL LEU GLY SER SER THR LEU LEU GLN
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REMARK 465
REMARK 465 MISSING RESIDUES
REMARK 465 THE FOLLOWING RESIDUES WERE NOT LOCATED IN THE
REMARK 465 EXPERIMENT. (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 465 IDENTIFIER; SSSEQ=SEQUENCE NUMBER; I=INSERTION CODE.)
REMARK 465
REMARK 465   M RES C SSSEQI
REMARK 465     MET A    1
REMARK 465     ALA A    2
REMARK 465     ALA A    3
REMARK 465     THR A    4
REMARK 465     ALA A    5
REMARK 465     ALA A    6
REMARK 465     GLU A    7
REMARK 465     ALA A    8
REMARK 465     VAL A    9
REMARK 465     ALA A   10
REMARK 465     SER A   11
REMARK 465     GLY A   12
REMARK 465     SER A   13
REMARK 465     GLY A   14
REMARK 465     LYS A  304
REMARK 465     ARG A  305
REMARK 465     ILE A  306
REMARK 470
REMARK 470 MISSING ATOM
REMARK 470 THE FOLLOWING RESIDUES HAVE MISSING ATOMS (M=MODEL NUMBER;
REMARK 470 RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE NUMBER;
REMARK 470 I=INSERTION CODE):
REMARK 470   M RES CSSEQI   ATOMS
REMARK 470     GLU A  15    CG   CD   OE1  OE2
REMARK 470     GLU A  29    CG   CD   OE1  OE2
REMARK 470     ASN A  87    CG   OD1  ND2
REMARK 470     LYS A 106    CD   CE   NZ
REMARK 470     LYS A 115    CG   CD   CE   NZ
REMARK 470     ARG A 117    CG   CD   NE   CZ   NH1  NH2
REMARK 470     GLN A 133    CG   CD   OE1  NE2
REMARK 470     GLN A 136    CG   CD   OE1  NE2
REMARK 470     GLN A 137    CG   CD   OE1  NE2
REMARK 470     ARG A 156    CG   CD   NE   CZ   NH1  NH2
REMARK 470     LYS A 157    CD   CE   NZ
REMARK 470     LYS A 311    CG   CD   CE   NZ
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND ANGLES
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD (M=MODEL NUMBER; RES=RESIDUE NAME; C=CHAIN
REMARK 500 IDENTIFIER; SSEQ=SEQUENCE NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,3(1X,A4,2X),12X,F5.1)
REMARK 500
REMARK 500 EXPECTED VALUES: ENGH AND HUBER, 1991
REMARK 500
REMARK 500   M RES CSSEQI ATM1   ATM2   ATM3
REMARK 500     TYR A 261  N   -  CA  -  C    ANGL. DEV. = -10.1 DEGREES
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
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REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: COVALENT BOND LENGTHS
REMARK 500
REMARK 500 THE STEREOCHEMICAL PARAMETERS OF THE FOLLOWING RESIDUES
REMARK 500 HAVE VALUES WHICH DEVIATE FROM EXPECTED VALUES BY MORE
REMARK 500 THAN 6*RMSD AND BY MORE THAN 0.150 ANGSTROMS (M=MODEL
REMARK 500 NUMBER; RES=RESIDUE NAME; C=CHAIN IDENTIFIER; SSEQ=SEQUENCE
REMARK 500 NUMBER; I=INSERTION CODE).
REMARK 500
REMARK 500 STANDARD TABLE:
REMARK 500 FORMAT: (10X,I3,1X,A3,1X,A1,I4,A1,1X,2(A4,A1,3X),12X,F5.3)
REMARK 500
REMARK 500 EXPECTED VALUESS: ENGH AND HUBER, 1991
REMARK 500
REMARK 500  M RES CSSEQI ATM1   RES CSSEQI ATM2    DEVIATION
REMARK 500    MET A 343  SD     MET A 343  CE       -0.151
REMARK 500
REMARK 500 REMARK: NULL
REMARK 500
REMARK 500 GEOMETRY AND STEREOCHEMISTRY
REMARK 500 SUBTOPIC: CLOSE CONTACTS IN SAME ASYMMETRIC UNIT
REMARK 500
REMARK 500 THE FOLLOWING ATOMS ARE IN CLOSE CONTACT.
REMARK 500
REMARK 500  ATM1  RES C  SSEQI   ATM2  RES C  SSEQI          DISTANCE
REMARK 500
REMARK 500  OG1   THR A   39     OE1   GLU A   262             2.16
REMARK 525
REMARK 525 SOLVENT
REMARK 525
REMARK 525 THE SOLVENT MOLECULES ARE GIVEN CHAIN IDENTIFIERS TO
REMARK 525 INDICATE THE PROTEIN CHAIN TO WHICH THEY ARE MOST CLOSELY
REMARK 525 ASSOCIATED WITH:
REMARK 525    PROTEIN CHAIN  SOLVENT CHAIN
REMARK 525    A              Z
REMARK 600
REMARK 600 HETEROGEN
REMARK 600
REMARK 600 FOR METAL ATOM FE    FE2 A1350   THE COORDINATION ANGLES ARE:
REMARK 600  1 HIS    199A  NE2
REMARK 600  2 ASP    201A  OD2      106.1
REMARK 600  3 HIS    279A  NE2       77.8  85.5
REMARK 600  4 AKG   1351A  O1       168.0  81.1  93.4
REMARK 600  5 AKG   1351A  O5        88.7 163.3  90.2  83.1
REMARK 600                            1     2     3     4
REMARK 700
REMARK 700 SHEET
REMARK 700 THE SHEET STRUCTURE OF THIS MOLECULE IS BIFURCATED. IN
REMARK 700 ORDER TO REPRESENT THIS FEATURE IN THE SHEET RECORDS BELOW,
REMARK 700 TWO SHEETS ARE DEFINED.
REMARK 800
REMARK 800 SITE
REMARK 800 SITE_IDENTIFIER: FEA
REMARK 800 SITE_DESCRIPTION: FE BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: AKG
REMARK 800 SITE_DESCRIPTION: AKG BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SA1
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 800
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REMARK 800 SITE_IDENTIFIER: SA2
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 800
REMARK 800 SITE_IDENTIFIER: SA3
REMARK 800 SITE_DESCRIPTION: SO4 BINDING SITE FOR CHAIN A
REMARK 900
REMARK 900 RELATED ENTRIES
REMARK 900 RELATED ID: 1H2K    RELATED DB: PDB
REMARK 900   FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2L    RELATED DB: PDB
REMARK 900   FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
REMARK 900 RELATED ID: 1H2M    RELATED DB: PDB
REMARK 900   FACTOR INHIBITING HIF-1 ALPHA IN COMPLEX
REMARK 900   WITH HIF-1 ALPHA FRAGMENT PEPTIDE
DBREF  1H2N A    1    349  SWS    Q969Q7   Q969Q7           1    349
SEQRES   1 A  349  MET ALA ALA THR ALA ALA GLU ALA VAL ALA SER GLY SER
SEQRES   2 A  349  GLY GLU PRO ARG GLU GLU ALA GLY ALA LEU GLY PRO ALA
SEQRES   3 A  349  TRP ASP GLU SER GLN LEU ARG SER TYR SER PHE PRO THR
SEQRES   4 A  349  ARG PRO ILE PRO ARG LEU SER GLN SER ASP PRO ARG ALA
SEQRES   5 A  349  GLU GLU LEU ILE GLU ASN GLU GLU PRO VAL VAL LEU THR
SEQRES   6 A  349  ASP THR ASN LEU VAL TYR PRO ALA LEU LYS TRP ASP LEU
SEQRES   7 A  349  GLU TYR LEU GLN GLU ASN ILE GLY ASN GLY ASP PHE SER
SEQRES   8 A  349  VAL TYR SER ALA SER THR HIS LYS PHE LEU TYR TYR ASP
SEQRES   9 A  349  GLU LYS LYS MET ALA ASN PHE GLN ASN PHE LYS PRO ARG
SEQRES  10 A  349  SER ASN ARG GLU GLU MET LYS PHE HIS GLU PHE VAL GLU
SEQRES  11 A  349  LYS LEU GLN ASP ILE GLN GLN ARG GLY GLY GLU GLU ARG
SEQRES  12 A  349  LEU TYR LEU GLN GLN THR LEU ASN ASP THR VAL GLY ARG
SEQRES  13 A  349  LYS ILE VAL MET ASP PHE LEU GLY PHE ASN TRP ASN TRP
SEQRES  14 A  349  ILE ASN LYS GLN GLN GLY LYS ARG GLY TRP GLY GLN LEU
SEQRES  15 A  349  THR SER ASN LEU LEU LEU ILE GLY MET GLU GLY ASN VAL
SEQRES  16 A  349  THR PRO ALA HIS TYR ASP GLU GLN GLN ASN PHE PHE ALA
SEQRES  17 A  349  GLN ILE LYS GLY TYR LYS ARG CYS ILE LEU PHE PRO PRO
SEQRES  18 A  349  ASP GLN PHE GLU CYS LEU TYR PRO TYR PRO VAL HIS HIS
SEQRES  19 A  349  PRO CYS ASP ARG GLN SER GLN VAL ASP PHE ASP ASN PRO
SEQRES  20 A  349  ASP TYR GLU ARG PHE PRO ASN PHE GLN ASN VAL VAL GLY
SEQRES  21 A  349  TYR GLU THR VAL VAL GLY PRO GLY ASP VAL LEU TYR ILE
SEQRES  22 A  349  PRO MET TYR TRP TRP HIS HIS ILE GLU SER LEU LEU ASN
SEQRES  23 A  349  GLY GLY ILE THR ILE THR VAL ASN PHE TRP TYR LYS GLY
SEQRES  24 A  349  ALA PRO THR PRO LYS ARG ILE GLU TYR PRO LEU LYS ALA
SEQRES  25 A  349  HIS GLN LYS VAL ALA ILE MET ARG ASN ILE GLU LYS MET
SEQRES  26 A  349  LEU GLY GLU ALA LEU GLY ASN PRO GLN GLU VAL GLY PRO
SEQRES  27 A  349  LEU LEU ASN THR MET ILE LYS GLY ARG TYR ASN
HET    FE2  A1350       1
HET    AKG  A1351      10
HET    SO4  A1352       5
HET    SO4  A1353       5
HET    SO4  A1354       5
HETNAM     FE2 FE (II) ION
HETNAM     AKG 2-OXYGLUTARIC ACID
HETNAM     SO4 SULFATE ION
FORMUL   3 FE2    FE1 2+
FORMUL   4 AKG    C5 H6 O5
FORMUL   5 SO4    3(O4 S1 2-)
FORMUL   6 HOH    *3(H2 O1)
HELIX    1   1 ASP A   28  LEU A   32  5                                5
HELIX    2   2 ASP A   49  ASN A   58  1                               10
HELIX    3   3 VAL A   70  TRP A   76  5                                7
HELIX    4   4 ASP A   77  ILE A   85  1                                9
HELIX    5   5 ASP A  104  GLN A  112  5                                9
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HELIX     6   6 PHE A  125  ARG A  138 1                                        14
HELIX     7   7 GLY A  155  GLY A  164 1                                        10
HELIX     8   8 ASN A  166  ARG A  177 1                                        12
HELIX     9   9 PRO A  220  ASP A  222 5                                         3
HELIX    10  10 GLN A  223  TYR A  228 1                                         6
HELIX    11  11 PHE A  252  VAL A  258 5                                         7
HELIX    12  12 LYS A  311  GLY A  331 1                                        21
HELIX    13  13 ASN A  332  GLN A  334 5                                         3
HELIX    14  14 GLU A  335  LYS A  345 1                                        11
SHEET     1  AA 5 THR A  39  PRO A  41 0
SHEET     2  AA 5 GLY A 260  VAL A 265 1  O  GLY A 260   N  ARG A  40
SHEET     3  AA 5 LYS A 214  PHE A 219 -1  O  LYS A 214   N  VAL A 265
SHEET     4  AA 5 TRP A 278  SER A 283 -1  O  TRP A 278   N  PHE A 219
SHEET     5  AA 5 VAL A 195  HIS A 199 -1  O  THR A 196   N  ILE A 281
SHEET     1  AB 6 ARG A  44  LEU A  45 0
SHEET     2  AB 6 VAL A  62  LEU A  64 1  O  VAL A  63   N  LEU A  45
SHEET     3  AB 6 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET     4  AB 6 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET     5  AB 6 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET     6  AB 6 LEU A 182  SER A 184 -1  N  THR A 183   O  TRP A 296
SHEET     1  AC 9 ARG A  44  LEU A  45 0
SHEET     2  AC 9 VAL A  62  LEU A  64 1  O  VAL A  63   N  LEU A  45
SHEET     3  AC 9 VAL A 270  ILE A 273 -1  O  VAL A 270   N  LEU A  64
SHEET     4  AC 9 GLN A 203  LYS A 211 -1  O  ASN A 205   N  ILE A 273
SHEET     5  AC 9 THR A 290  LYS A 298 -1  O  ILE A 291   N  ILE A 210
SHEET     6  AC 9 LEU A 186  GLY A 190 -1  O  LEU A 186   N  ASN A 294
SHEET     7  AC 9 ARG A 143  THR A 149 -1  O  LEU A 146   N  ILE A 189
SHEET     8  AC 9 ASP A  89  ALA A  95 -1  O  SER A  91   N  GLN A 147
SHEET     9  AC 9 SER A 118  LYS A 124 -1  O  ASN A 119   N  SER A  94
LINK         FE   FE2 A1350                 NE2 HIS A 199      1555     1555
LINK         FE   FE2 A1350                 OD2 ASP A 201      1555     1555
LINK         FE   FE2 A1350                 NE2 HIS A 279      1555     1555
LINK         FE   FE2 A1350                  O1 AKG A1351      1555     1555
LINK         FE   FE2 A1350                  O5 AKG A1351      1555     1555
CISPEP    1 TYR A  308    PRO A  309         0          2.48
SITE      1 FEA  3 HIS A 199  ASP A 201  HIS A 279
SITE      1 AKG 13 TYR A 145  LEU A 188  THR A 196  HIS A 199
SITE      2 AKG 13 ASP A 201  ASN A 205  PHE A 207  LYS A 214
SITE      3 AKG 13 HIS A 279  ILE A 281  ASN A 294  TRP A 296
SITE      4 AKG 13 HOH Z   1
SITE      1 SA1  4 ARG A 138  GLY A 140  GLU A 141  GLU A 142
SITE      1 SA2  5 ARG A 143  GLU A 192  GLY A 193  LEU A 285
SITE      2 SA2  5 ASN A 286
SITE      1 SA3  4 LYS A 107  GLU A 202  ARG A 320  LYS A 324
CRYST1   86.342   86.342  146.732  90.00   90.00   90.00 P 41 21 2      8
ORIGX1      1.000000  0.000000  0.000000        0.00000
ORIGX2      0.000000  1.000000  0.000000        0.00000
ORIGX3      0.000000  0.000000  1.000000        0.00000
SCALE1      0.011582  0.000000  0.000000        0.00000
SCALE2      0.000000  0.011582  0.000000        0.00000
SCALE3      0.000000  0.000000  0.006815        0.00000
ATOM      1  N   GLU A  15      8.558  32.684   9.824  1.00 41.85           N
ATOM      2  CA  GLU A  15      7.178  32.135   9.672  1.00 42.19           C
ATOM      3  C   GLU A  15      7.180  30.645   9.998  1.00 42.19           C
ATOM      4  O   GLU A  15      7.959  29.895   9.424  1.00 42.28           O
ATOM      5  CB  GLU A  15      6.661  32.366   8.258  1.00 42.28           C
ATOM      6  N   PRO A  16      6.281  30.198  10.866  1.00 42.29           N
ATOM      7  CA  PRO A  16      6.376  28.826  11.391  1.00 42.53           C
ATOM      8  C   PRO A  16      6.351  27.762  10.307  1.00 42.54           C
ATOM      9  O   PRO A  16      5.571  27.819   9.369  1.00 42.92           O
ATOM     10  CB  PRO A  16      5.172  28.713  12.337  1.00 42.63           C
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ATOM	11	CG	PRO A	16	4.749	30.155	12.612	1.00	42.41	C
ATOM	12	CD	PRO A	16	5.103	30.916	11.382	1.00	42.22	C
ATOM	13	N	ARG A	17	7.231	26.791	10.446	1.00	42.51	N
ATOM	14	CA	ARG A	17	7.337	25.723	9.478	1.00	42.62	C
ATOM	15	C	ARG A	17	6.095	24.856	9.527	1.00	42.85	C
ATOM	16	O	ARG A	17	5.492	24.705	10.587	1.00	43.51	O
ATOM	17	CB	ARG A	17	8.505	24.800	9.845	1.00	42.50	C
ATOM	18	CG	ARG A	17	9.871	25.434	9.859	1.00	42.22	C
ATOM	19	CD	ARG A	17	10.995	24.466	10.228	1.00	42.12	C
ATOM	20	NE	ARG A	17	11.085	24.138	11.656	1.00	42.49	N
ATOM	21	CZ	ARG A	17	11.588	24.943	12.607	1.00	42.43	C
ATOM	22	NH1	ARG A	17	12.033	26.158	12.316	1.00	42.11	N
ATOM	23	NH2	ARG A	17	11.649	24.529	13.869	1.00	42.25	N
ATOM	24	N	GLU A	18	5.742	24.242	8.404	1.00	42.60	N
ATOM	25	CA	GLU A	18	4.662	23.268	8.405	1.00	42.36	C
ATOM	26	C	GLU A	18	5.203	21.870	8.728	1.00	41.90	C
ATOM	27	O	GLU A	18	6.249	21.472	8.216	1.00	41.98	O
ATOM	28	CB	GLU A	18	3.988	23.224	7.041	1.00	42.57	C
ATOM	29	CG	GLU A	18	3.363	24.537	6.620	1.00	43.60	C
ATOM	30	CD	GLU A	18	1.993	24.756	7.233	1.00	45.11	C
ATOM	31	OE1	GLU A	18	1.365	23.766	7.686	1.00	45.48	O
ATOM	32	OE2	GLU A	18	1.546	25.926	7.253	1.00	46.49	O
ATOM	33	N	GLU A	19	4.487	21.133	9.578	1.00	41.27	N
ATOM	34	CA	GLU A	19	4.806	19.737	9.894	1.00	40.61	C
ATOM	35	C	GLU A	19	4.478	18.802	8.748	1.00	39.73	C
ATOM	36	O	GLU A	19	3.424	18.915	8.137	1.00	39.76	O
ATOM	37	CB	GLU A	19	4.024	19.299	11.128	1.00	40.72	C
ATOM	38	CG	GLU A	19	4.507	20.034	12.361	1.00	42.24	C
ATOM	39	CD	GLU A	19	4.358	19.278	13.668	1.00	44.37	C
ATOM	40	OE1	GLU A	19	3.852	18.127	13.680	1.00	46.17	O
ATOM	41	OE2	GLU A	19	4.769	19.863	14.700	1.00	45.44	O
ATOM	42	N	ALA A	20	5.369	17.859	8.478	1.00	38.99	N
ATOM	43	CA	ALA A	20	5.164	16.922	7.390	1.00	38.71	C
ATOM	44	C	ALA A	20	3.831	16.232	7.542	1.00	38.51	C
ATOM	45	O	ALA A	20	3.391	15.933	8.649	1.00	38.80	O
ATOM	46	CB	ALA A	20	6.280	15.895	7.328	1.00	38.51	C
ATOM	47	N	GLY A	21	3.180	15.991	6.419	1.00	38.03	N
ATOM	48	CA	GLY A	21	1.924	15.290	6.449	1.00	38.11	C
ATOM	49	C	GLY A	21	0.746	16.205	6.682	1.00	38.19	C
ATOM	50	O	GLY A	21	-0.328	15.743	7.049	1.00	38.25	O
ATOM	51	N	ALA A	22	0.941	17.497	6.447	1.00	38.40	N
ATOM	52	CA	ALA A	22	-0.130	18.472	6.571	1.00	38.50	C
ATOM	53	C	ALA A	22	-0.725	18.413	7.960	1.00	38.60	C
ATOM	54	O	ALA A	22	-1.930	18.547	8.142	1.00	38.65	O
ATOM	55	CB	ALA A	22	-1.196	18.242	5.520	1.00	38.61	C
ATOM	56	N	LEU A	23	0.135	18.206	8.946	1.00	38.75	N
ATOM	57	CA	LEU A	23	-0.297	18.257	10.330	1.00	38.82	C
ATOM	58	C	LEU A	23	-0.321	19.684	10.843	1.00	38.78	C
ATOM	59	O	LEU A	23	-0.525	19.919	12.030	1.00	38.74	O
ATOM	60	CB	LEU A	23	0.597	17.392	11.193	1.00	38.77	C
ATOM	61	CG	LEU A	23	0.421	15.952	10.736	1.00	39.03	C
ATOM	62	CD1	LEU A	23	1.203	14.958	11.579	1.00	39.08	C
ATOM	63	CD2	LEU A	23	-1.070	15.636	10.750	1.00	39.43	C
ATOM	64	N	GLY A	24	-0.094	20.636	9.947	1.00	38.75	N
ATOM	65	CA	GLY A	24	-0.248	22.025	10.298	1.00	38.79	C
ATOM	66	C	GLY A	24	0.972	22.669	10.861	1.00	38.90	C
ATOM	67	O	GLY A	24	2.042	22.084	10.961	1.00	39.06	O
ATOM	68	N	PRO A	25	0.791	23.906	11.267	1.00	39.19	N
ATOM	69	CA	PRO A	25	1.903	24.682	11.778	1.00	39.35	C
ATOM	70	C	PRO A	25	2.332	24.037	13.074	1.00	39.62	C
ATOM	71	O	PRO A	25	1.492	23.633	13.871	1.00	39.48	O

ATOM	72	CB	PRO	A	25	1.299	26.062	12.019	1.00	39.24	C
ATOM	73	CG	PRO	A	25	-0.142	25.920	11.961	1.00	38.71	C
ATOM	74	CD	PRO	A	25	-0.490	24.616	11.365	1.00	39.17	C
ATOM	75	N	ALA	A	26	3.631	23.899	13.252	1.00	40.22	N
ATOM	76	CA	ALA	A	26	4.170	23.342	14.476	1.00	40.79	C
ATOM	77	C	ALA	A	26	3.930	24.294	15.666	1.00	41.07	C
ATOM	78	O	ALA	A	26	3.769	23.837	16.797	1.00	41.57	O
ATOM	79	CB	ALA	A	26	5.633	23.068	14.300	1.00	40.98	C
ATOM	80	N	TRP	A	27	3.931	25.605	15.429	1.00	40.80	N
ATOM	81	CA	TRP	A	27	3.543	26.552	16.477	1.00	40.67	C
ATOM	82	C	TRP	A	27	2.982	27.848	15.880	1.00	40.33	C
ATOM	83	O	TRP	A	27	2.777	27.940	14.675	1.00	40.13	O
ATOM	84	CB	TRP	A	27	4.742	26.860	17.358	1.00	40.70	C
ATOM	85	CG	TRP	A	27	5.942	27.014	16.558	1.00	41.36	C
ATOM	86	CD1	TRP	A	27	6.762	26.023	16.074	1.00	43.03	C
ATOM	87	CD2	TRP	A	27	6.466	28.233	16.084	1.00	40.41	C
ATOM	88	NE1	TRP	A	27	7.788	26.579	15.344	1.00	42.65	N
ATOM	89	CE2	TRP	A	27	7.618	27.938	15.331	1.00	41.20	C
ATOM	90	CE3	TRP	A	27	6.081	29.555	16.223	1.00	40.47	C
ATOM	91	CZ2	TRP	A	27	8.370	28.912	14.732	1.00	41.10	C
ATOM	92	CZ3	TRP	A	27	6.827	30.514	15.640	1.00	41.11	C
ATOM	93	CH2	TRP	A	27	7.962	30.198	14.900	1.00	41.57	C
ATOM	94	N	ASP	A	28	2.677	28.830	16.723	1.00	39.99	N
ATOM	95	CA	ASP	A	28	2.322	30.143	16.209	1.00	39.78	C
ATOM	96	C	ASP	A	28	2.802	31.257	17.121	1.00	39.17	C
ATOM	97	O	ASP	A	28	3.227	31.013	18.240	1.00	39.00	O
ATOM	98	CB	ASP	A	28	0.826	30.254	15.981	1.00	40.16	C
ATOM	99	CG	ASP	A	28	0.066	30.380	17.258	1.00	40.79	C
ATOM	100	OD1	ASP	A	28	0.044	31.496	17.821	1.00	41.30	O
ATOM	101	OD2	ASP	A	28	-0.531	29.414	17.774	1.00	42.25	O
ATOM	102	N	GLU	A	29	2.720	32.486	16.624	1.00	38.73	N
ATOM	103	CA	GLU	A	29	3.223	33.663	17.341	1.00	38.23	C
ATOM	104	C	GLU	A	29	2.739	33.764	18.781	1.00	37.69	C
ATOM	105	O	GLU	A	29	3.492	34.131	19.664	1.00	37.34	O
ATOM	106	CB	GLU	A	29	2.834	34.924	16.594	1.00	38.20	C
ATOM	107	N	SER	A	30	1.482	33.418	19.012	1.00	37.46	N
ATOM	108	CA	SER	A	30	0.874	33.583	20.324	1.00	37.18	C
ATOM	109	C	SER	A	30	1.562	32.774	21.399	1.00	36.93	C
ATOM	110	O	SER	A	30	1.282	32.949	22.577	1.00	36.82	O
ATOM	111	CB	SER	A	30	-0.595	33.164	20.284	1.00	37.23	C
ATOM	112	OG	SER	A	30	-0.744	31.792	20.619	1.00	36.97	O
ATOM	113	N	GLN	A	31	2.441	31.867	20.999	1.00	36.85	N
ATOM	114	CA	GLN	A	31	3.128	31.021	21.961	1.00	36.77	C
ATOM	115	C	GLN	A	31	4.445	31.636	22.340	1.00	36.59	C
ATOM	116	O	GLN	A	31	5.141	31.127	23.220	1.00	36.74	O
ATOM	117	CB	GLN	A	31	3.366	29.621	21.395	1.00	36.71	C
ATOM	118	CG	GLN	A	31	2.084	28.828	21.234	1.00	36.97	C
ATOM	119	CD	GLN	A	31	2.282	27.497	20.560	1.00	36.68	C
ATOM	120	OE1	GLN	A	31	2.133	27.386	19.346	1.00	36.62	O
ATOM	121	NE2	GLN	A	31	2.601	26.478	21.343	1.00	36.85	N
ATOM	122	N	LEU	A	32	4.794	32.726	21.670	1.00	36.32	N
ATOM	123	CA	LEU	A	32	6.050	33.381	21.942	1.00	36.17	C
ATOM	124	C	LEU	A	32	5.817	34.498	22.921	1.00	36.09	C
ATOM	125	O	LEU	A	32	4.837	35.233	22.815	1.00	36.18	O
ATOM	126	CB	LEU	A	32	6.673	33.928	20.664	1.00	36.07	C
ATOM	127	CG	LEU	A	32	6.990	32.871	19.604	1.00	36.72	C
ATOM	128	CD1	LEU	A	32	7.747	33.457	18.453	1.00	36.96	C
ATOM	129	CD2	LEU	A	32	7.797	31.744	20.161	1.00	37.31	C
ATOM	130	N	ARG	A	33	6.700	34.576	23.908	1.00	35.99	N
ATOM	131	CA	ARG	A	33	6.713	35.671	24.851	1.00	36.15	C
ATOM	132	C	ARG	A	33	7.171	36.941	24.130	1.00	35.95	C

ATOM	133	O	ARG A	33	7.950	36.888	23.188	1.00	35.75	O
ATOM	134	CB	ARG A	33	7.671	35.350	25.991	1.00	36.41	C
ATOM	135	CG	ARG A	33	7.210	34.204	26.854	1.00	36.76	C
ATOM	136	CD	ARG A	33	8.082	33.948	28.070	1.00	36.81	C
ATOM	137	NE	ARG A	33	7.479	32.927	28.923	1.00	37.39	N
ATOM	138	CZ	ARG A	33	6.501	33.160	29.785	1.00	37.61	C
ATOM	139	NH1	ARG A	33	6.027	34.385	29.931	1.00	37.75	N
ATOM	140	NH2	ARG A	33	6.001	32.171	30.513	1.00	38.47	N
ATOM	141	N	SER A	34	6.707	38.088	24.588	1.00	35.92	N
ATOM	142	CA	SER A	34	7.017	39.331	23.902	1.00	36.05	C
ATOM	143	C	SER A	34	8.044	40.146	24.671	1.00	35.47	C
ATOM	144	O	SER A	34	7.940	40.311	25.884	1.00	35.41	O
ATOM	145	CB	SER A	34	5.732	40.120	23.691	1.00	36.27	C
ATOM	146	OG	SER A	34	5.046	40.253	24.920	1.00	37.99	O
ATOM	147	N	TYR A	35	9.031	40.655	23.945	1.00	35.01	N
ATOM	148	CA	TYR A	35	10.140	41.370	24.543	1.00	34.69	C
ATOM	149	C	TYR A	35	10.400	42.693	23.853	1.00	34.59	C
ATOM	150	O	TYR A	35	9.841	42.989	22.813	1.00	34.45	O
ATOM	151	CB	TYR A	35	11.384	40.501	24.469	1.00	34.71	C
ATOM	152	CG	TYR A	35	11.228	39.222	25.232	1.00	34.43	C
ATOM	153	CD1	TYR A	35	10.928	39.246	26.573	1.00	33.87	C
ATOM	154	CD2	TYR A	35	11.350	37.986	24.602	1.00	35.32	C
ATOM	155	CE1	TYR A	35	10.775	38.087	27.285	1.00	34.96	C
ATOM	156	CE2	TYR A	35	11.192	36.807	25.309	1.00	35.50	C
ATOM	157	CZ	TYR A	35	10.904	36.865	26.653	1.00	35.16	C
ATOM	158	OH	TYR A	35	10.742	35.709	27.376	1.00	34.77	O
ATOM	159	N	SER A	36	11.290	43.481	24.429	1.00	34.77	N
ATOM	160	CA	SER A	36	11.572	44.814	23.924	1.00	34.74	C
ATOM	161	C	SER A	36	12.567	44.926	22.771	1.00	34.30	C
ATOM	162	O	SER A	36	12.805	46.011	22.287	1.00	34.23	O
ATOM	163	CB	SER A	36	12.127	45.627	25.077	1.00	34.91	C
ATOM	164	OG	SER A	36	13.395	45.116	25.449	1.00	35.56	O
ATOM	165	N	PHE A	37	13.155	43.838	22.318	1.00	34.15	N
ATOM	166	CA	PHE A	37	14.193	43.963	21.306	1.00	34.11	C
ATOM	167	C	PHE A	37	13.969	43.177	20.044	1.00	34.07	C
ATOM	168	O	PHE A	37	13.356	42.109	20.017	1.00	33.98	O
ATOM	169	CB	PHE A	37	15.514	43.479	21.867	1.00	34.08	C
ATOM	170	CG	PHE A	37	15.417	42.147	22.438	1.00	34.33	C
ATOM	171	CD1	PHE A	37	15.445	41.034	21.621	1.00	35.66	C
ATOM	172	CD2	PHE A	37	15.208	41.990	23.777	1.00	35.42	C
ATOM	173	CE1	PHE A	37	15.320	39.782	22.143	1.00	35.73	C
ATOM	174	CE2	PHE A	37	15.084	40.736	24.317	1.00	36.14	C
ATOM	175	CZ	PHE A	37	15.141	39.628	23.497	1.00	36.55	C
ATOM	176	N	PRO A	38	14.565	43.682	18.991	1.00	33.95	N
ATOM	177	CA	PRO A	38	14.474	43.028	17.704	1.00	33.91	C
ATOM	178	C	PRO A	38	15.445	41.878	17.640	1.00	33.74	C
ATOM	179	O	PRO A	38	16.366	41.803	18.441	1.00	33.82	O
ATOM	180	CB	PRO A	38	14.887	44.133	16.751	1.00	34.03	C
ATOM	181	CG	PRO A	38	15.874	44.935	17.548	1.00	33.99	C
ATOM	182	CD	PRO A	38	15.385	44.903	18.945	1.00	33.80	C
ATOM	183	N	THR A	39	15.233	40.996	16.678	1.00	34.02	N
ATOM	184	CA	THR A	39	16.089	39.844	16.464	1.00	34.00	C
ATOM	185	C	THR A	39	16.035	39.490	15.008	1.00	34.09	C
ATOM	186	O	THR A	39	15.137	39.894	14.311	1.00	34.05	O
ATOM	187	CB	THR A	39	15.563	38.637	17.201	1.00	33.94	C
ATOM	188	OG1	THR A	39	14.250	38.336	16.714	1.00	34.18	O
ATOM	189	CG2	THR A	39	15.338	38.915	18.642	1.00	34.09	C
ATOM	190	N	ARG A	40	16.992	38.695	14.576	1.00	34.62	N
ATOM	191	CA	ARG A	40	17.066	38.204	13.228	1.00	35.13	C
ATOM	192	C	ARG A	40	17.100	36.721	13.361	1.00	35.17	C
ATOM	193	O	ARG A	40	17.419	36.189	14.434	1.00	34.96	O

ATOM	194	CB	ARG A	40	18.352	38.649	12.568	1.00	35.54	C
ATOM	195	CG	ARG A	40	18.358	40.103	12.287	1.00	38.87	C
ATOM	196	CD	ARG A	40	16.975	40.597	11.893	1.00	42.88	C
ATOM	197	NE	ARG A	40	16.737	40.908	10.489	1.00	44.50	N
ATOM	198	CZ	ARG A	40	15.554	41.298	10.076	1.00	46.73	C
ATOM	199	NH1	ARG A	40	14.574	41.350	10.974	1.00	46.73	N
ATOM	200	NH2	ARG A	40	15.334	41.636	8.802	1.00	48.87	N
ATOM	201	N	PRO A	41	16.775	36.026	12.285	1.00	35.20	N
ATOM	202	CA	PRO A	41	16.749	34.579	12.348	1.00	35.24	C
ATOM	203	C	PRO A	41	18.114	33.973	12.275	1.00	35.10	C
ATOM	204	O	PRO A	41	18.995	34.455	11.573	1.00	35.96	O
ATOM	205	CB	PRO A	41	16.003	34.208	11.079	1.00	35.27	C
ATOM	206	CG	PRO A	41	15.408	35.453	10.640	1.00	34.93	C
ATOM	207	CD	PRO A	41	16.381	36.494	10.953	1.00	34.81	C
ATOM	208	N	ILE A	42	18.277	32.910	13.022	1.00	34.55	N
ATOM	209	CA	ILE A	42	19.435	32.099	12.909	1.00	34.29	C
ATOM	210	C	ILE A	42	19.145	31.194	11.713	1.00	34.29	C
ATOM	211	O	ILE A	42	18.035	30.654	11.598	1.00	34.38	O
ATOM	212	CB	ILE A	42	19.545	31.258	14.150	1.00	34.14	C
ATOM	213	CG1	ILE A	42	19.742	32.152	15.368	1.00	34.83	C
ATOM	214	CG2	ILE A	42	20.679	30.297	14.016	1.00	34.41	C
ATOM	215	CD1	ILE A	42	19.479	31.467	16.678	1.00	35.37	C
ATOM	216	N	PRO A	43	20.127	31.010	10.836	1.00	33.80	N
ATOM	217	CA	PRO A	43	19.982	30.122	9.686	1.00	33.62	C
ATOM	218	C	PRO A	43	19.714	28.676	10.066	1.00	33.65	C
ATOM	219	O	PRO A	43	20.320	28.198	11.015	1.00	33.60	O
ATOM	220	CB	PRO A	43	21.366	30.174	9.043	1.00	33.63	C
ATOM	221	CG	PRO A	43	21.986	31.385	9.543	1.00	33.11	C
ATOM	222	CD	PRO A	43	21.455	31.630	10.882	1.00	33.51	C
ATOM	223	N	ARG A	44	18.820	28.007	9.341	1.00	33.86	N
ATOM	224	CA	ARG A	44	18.597	26.572	9.486	1.00	34.00	C
ATOM	225	C	ARG A	44	19.176	25.968	8.247	1.00	33.87	C
ATOM	226	O	ARG A	44	18.783	26.319	7.152	1.00	33.76	O
ATOM	227	CB	ARG A	44	17.125	26.185	9.520	1.00	34.10	C
ATOM	228	CG	ARG A	44	16.301	26.879	10.577	1.00	35.44	C
ATOM	229	CD	ARG A	44	14.781	26.505	10.583	1.00	37.36	C
ATOM	230	NE	ARG A	44	14.415	25.108	10.265	1.00	37.59	N
ATOM	231	CZ	ARG A	44	14.237	24.144	11.187	1.00	39.71	C
ATOM	232	NH1	ARG A	44	14.429	24.396	12.487	1.00	39.94	N
ATOM	233	NH2	ARG A	44	13.876	22.915	10.821	1.00	40.07	N
ATOM	234	N	LEU A	45	20.086	25.030	8.407	1.00	33.98	N
ATOM	235	CA	LEU A	45	20.747	24.467	7.269	1.00	34.15	C
ATOM	236	C	LEU A	45	20.950	22.995	7.389	1.00	34.37	C
ATOM	237	O	LEU A	45	20.901	22.453	8.486	1.00	34.52	O
ATOM	238	CB	LEU A	45	22.116	25.090	7.183	1.00	34.25	C
ATOM	239	CG	LEU A	45	22.080	26.576	6.905	1.00	34.80	C
ATOM	240	CD1	LEU A	45	23.454	27.095	7.177	1.00	36.05	C
ATOM	241	CD2	LEU A	45	21.655	26.837	5.481	1.00	34.78	C
ATOM	242	N	SER A	46	21.199	22.343	6.255	1.00	34.55	N
ATOM	243	CA	SER A	46	21.549	20.949	6.306	1.00	34.60	C
ATOM	244	C	SER A	46	22.985	20.838	6.681	1.00	34.89	C
ATOM	245	O	SER A	46	23.826	21.671	6.383	1.00	34.54	O
ATOM	246	CB	SER A	46	21.356	20.206	5.006	1.00	34.64	C
ATOM	247	OG	SER A	46	22.231	19.090	4.989	1.00	33.61	O
ATOM	248	N	GLN A	47	23.247	19.736	7.324	1.00	35.61	N
ATOM	249	CA	GLN A	47	24.539	19.462	7.866	1.00	36.10	C
ATOM	250	C	GLN A	47	25.565	19.368	6.746	1.00	35.96	C
ATOM	251	O	GLN A	47	26.754	19.537	6.969	1.00	36.13	O
ATOM	252	CB	GLN A	47	24.399	18.168	8.669	1.00	36.22	C
ATOM	253	CG	GLN A	47	25.604	17.340	8.730	1.00	37.25	C
ATOM	254	CD	GLN A	47	25.724	16.459	7.532	1.00	39.03	C

ATOM	255	OE1	GLN	A	47	24.766	16.306	6.759	1.00	38.79	O
ATOM	256	NE2	GLN	A	47	26.902	15.872	7.354	1.00	41.44	N
ATOM	257	N	SER	A	48	25.088	19.146	5.531	1.00	35.87	N
ATOM	258	CA	SER	A	48	25.958	18.938	4.391	1.00	35.90	C
ATOM	259	C	SER	A	48	26.301	20.244	3.715	1.00	36.06	C
ATOM	260	O	SER	A	48	27.215	20.334	2.897	1.00	35.95	O
ATOM	261	CB	SER	A	48	25.214	18.073	3.402	1.00	35.97	C.
ATOM	262	OG	SER	A	48	23.933	18.635	3.158	1.00	36.62	O
ATOM	263	N	ASP	A	49	25.552	21.266	4.075	1.00	36.34	N
ATOM	264	CA	ASP	A	49	25.701	22.564	3.491	1.00	36.65	C
ATOM	265	C	ASP	A	49	26.963	23.236	3.952	1.00	37.06	C
ATOM	266	O	ASP	A	49	27.114	23.507	5.138	1.00	37.24	O
ATOM	267	CB	ASP	A	49	24.545	23.405	3.953	1.00	36.80	C
ATOM	268	CG	ASP	A	49	24.441	24.674	3.206	1.00	37.08	C
ATOM	269	OD1	ASP	A	49	25.490	25.217	2.810	1.00	37.38	O
ATOM	270	OD2	ASP	A	49	23.343	25.187	2.953	1.00	38.64	O
ATOM	271	N	PRO	A	50	27.857	23.565	3.029	1.00	37.42	N
ATOM	272	CA	PRO	A	50	29.113	24.196	3.430	1.00	37.32	C
ATOM	273	C	PRO	A	50	28.881	25.413	4.298	1.00	37.46	C
ATOM	274	O	PRO	A	50	29.742	25.727	5.113	1.00	37.85	O
ATOM	275	CB	PRO	A	50	29.750	24.604	2.108	1.00	37.21	C
ATOM	276	CG	PRO	A	50	29.134	23.726	1.086	1.00	37.39	C
ATOM	277	CD	PRO	A	50	27.755	23.395	1.568	1.00	37.34	C
ATOM	278	N	ARG	A	51	27.743	26.081	4.162	1.00	37.64	N
ATOM	279	CA	ARG	A	51	27.535	27.301	4.932	1.00	38.06	C
ATOM	280	C	ARG	A	51	27.470	27.000	6.421	1.00	38.26	C
ATOM	281	O	ARG	A	51	27.920	27.798	7.250	1.00	38.47	O
ATOM	282	CB	ARG	A	51	26.282	28.055	4.470	1.00	38.14	C
ATOM	283	CG	ARG	A	51	26.418	28.692	3.059	1.00	38.89	C
ATOM	284	CD	ARG	A	51	25.117	29.259	2.455	1.00	39.65	C
ATOM	285	NE	ARG	A	51	24.121	28.211	2.175	1.00	41.25	N
ATOM	286	CZ	ARG	A	51	22.798	28.404	2.078	1.00	41.86	C
ATOM	287	NH1	ARG	A	51	22.264	29.605	2.225	1.00	43.70	N
ATOM	288	NH2	ARG	A	51	21.994	27.393	1.818	1.00	41.90	N
ATOM	289	N	ALA	A	52	26.936	25.837	6.770	1.00	38.26	N
ATOM	290	CA	ALA	A	52	26.807	25.499	8.171	1.00	38.30	C
ATOM	291	C	ALA	A	52	28.206	25.374	8.683	1.00	38.45	C
ATOM	292	O	ALA	A	52	28.572	25.922	9.732	1.00	38.37	O
ATOM	293	CB	ALA	A	52	26.085	24.208	8.344	1.00	38.25	C
ATOM	294	N	GLU	A	53	29.003	24.665	7.901	1.00	38.56	N
ATOM	295	CA	GLU	A	53	30.361	24.420	8.291	1.00	38.94	C
ATOM	296	C	GLU	A	53	31.145	25.717	8.484	1.00	39.00	C
ATOM	297	O	GLU	A	53	31.970	25.793	9.386	1.00	38.49	O
ATOM	298	CB	GLU	A	53	31.060	23.507	7.314	1.00	38.91	C
ATOM	299	CG	GLU	A	53	32.139	22.738	8.035	1.00	40.55	C
ATOM	300	CD	GLU	A	53	31.662	21.403	8.579	1.00	42.38	C
ATOM	301	OE1	GLU	A	53	30.475	21.274	8.957	1.00	43.42	O
ATOM	302	OE2	GLU	A	53	32.498	20.478	8.639	1.00	44.15	O
ATOM	303	N	GLU	A	54	30.897	26.737	7.662	1.00	39.21	N
ATOM	304	CA	GLU	A	54	31.592	28.004	7.870	1.00	39.44	C
ATOM	305	C	GLU	A	54	31.092	28.625	9.144	1.00	39.05	C
ATOM	306	O	GLU	A	54	31.848	29.262	9.869	1.00	39.51	O
ATOM	307	CB	GLU	A	54	31.337	29.023	6.772	1.00	39.59	C
ATOM	308	CG	GLU	A	54	31.940	28.693	5.433	1.00	41.75	C
ATOM	309	CD	GLU	A	54	31.098	29.263	4.302	1.00	44.74	C
ATOM	310	OE1	GLU	A	54	30.546	30.379	4.509	1.00	46.67	O
ATOM	311	OE2	GLU	A	54	30.972	28.596	3.234	1.00	44.49	O
ATOM	312	N	LEU	A	55	29.812	28.468	9.424	1.00	38.37	N
ATOM	313	CA	LEU	A	55	29.291	29.137	10.583	1.00	38.08	C
ATOM	314	C	LEU	A	55	29.906	28.613	11.847	1.00	37.88	C
ATOM	315	O	LEU	A	55	30.359	29.397	12.693	1.00	37.59	O

ATOM	316	CB	LEU A	55	27.789	29.006	10.648	1.00	38.28	C
ATOM	317	CG	LEU A	55	27.142	29.846	9.564	1.00	37.79	C
ATOM	318	CD1	LEU A	55	25.722	29.443	9.409	1.00	38.31	C
ATOM	319	CD2	LEU A	55	27.233	31.279	9.951	1.00	37.31	C
ATOM	320	N	ILE A	56	29.938	27.286	11.971	1.00	37.71	N
ATOM	321	CA	ILE A	56	30.455	26.667	13.183	1.00	37.35	C
ATOM	322	C	ILE A	56	31.912	26.988	13.321	1.00	37.30	C
ATOM	323	O	ILE A	56	32.373	27.320	14.406	1.00	36.89	O
ATOM	324	CB	ILE A	56	30.288	25.171	13.175	1.00	37.30	C
ATOM	325	CG1	ILE A	56	28.810	24.789	13.213	1.00	36.97	C
ATOM	326	CG2	ILE A	56	30.968	24.602	14.397	1.00	37.75	C
ATOM	327	CD1	ILE A	56	28.543	23.358	12.820	1.00	36.35	C
ATOM	328	N	GLU A	57	32.627	26.899	12.204	1.00	37.67	N
ATOM	329	CA	GLU A	57	34.045	27.204	12.166	1.00	38.21	C
ATOM	330	C	GLU A	57	34.277	28.569	12.784	1.00	38.33	C
ATOM	331	O	GLU A	57	35.210	28.758	13.566	1.00	38.33	O
ATOM	332	CB	GLU A	57	34.547	27.214	10.725	1.00	38.49	C
ATOM	333	CG	GLU A	57	36.038	27.461	10.559	1.00	40.09	C
ATOM	334	CD	GLU A	57	36.870	26.539	11.424	1.00	42.96	C
ATOM	335	OE1	GLU A	57	36.527	25.329	11.487	1.00	43.20	O
ATOM	336	OE2	GLU A	57	37.852	27.032	12.044	1.00	44.14	O
ATOM	337	N	ASN A	58	33.394	29.508	12.460	1.00	38.32	N
ATOM	338	CA	ASN A	58	33.546	30.890	12.891	1.00	38.38	C
ATOM	339	C	ASN A	58	32.849	31.221	14.167	1.00	38.06	C
ATOM	340	O	ASN A	58	32.683	32.387	14.507	1.00	37.86	O
ATOM	341	CB	ASN A	58	32.955	31.813	11.853	1.00	38.73	C
ATOM	342	CG	ASN A	58	33.991	32.455	11.013	1.00	39.49	C
ATOM	343	OD1	ASN A	58	34.501	31.841	10.083	1.00	42.51	O
ATOM	344	ND2	ASN A	58	34.322	33.704	11.324	1.00	40.15	N
ATOM	345	N	GLU A	59	32.399	30.196	14.856	1.00	37.88	N
ATOM	346	CA	GLU A	59	31.683	30.396	16.092	1.00	37.68	C
ATOM	347	C	GLU A	59	30.479	31.307	16.005	1.00	37.57	C
ATOM	348	O	GLU A	59	30.305	32.203	16.813	1.00	36.94	O
ATOM	349	CB	GLU A	59	32.663	30.857	17.118	1.00	37.60	C
ATOM	350	CG	GLU A	59	33.710	29.785	17.212	1.00	38.25	C
ATOM	351	CD	GLU A	59	34.545	29.886	18.435	1.00	38.10	C
ATOM	352	OE1	GLU A	59	35.654	30.430	18.303	1.00	40.30	O
ATOM	353	OE2	GLU A	59	34.089	29.420	19.498	1.00	37.62	O
ATOM	354	N	GLU A	60	29.630	31.025	15.025	1.00	37.73	N
ATOM	355	CA	GLU A	60	28.347	31.692	14.902	1.00	37.79	C
ATOM	356	C	GLU A	60	27.290	30.620	14.923	1.00	37.12	C
ATOM	357	O	GLU A	60	27.488	29.539	14.388	1.00	37.94	O
ATOM	358	CB	GLU A	60	28.252	32.456	13.606	1.00	38.14	C
ATOM	359	CG	GLU A	60	29.388	33.411	13.414	1.00	39.56	C
ATOM	360	CD	GLU A	60	28.986	34.547	12.518	1.00	42.62	C
ATOM	361	OE1	GLU A	60	29.023	34.389	11.276	1.00	42.22	O
ATOM	362	OE2	GLU A	60	28.611	35.601	13.082	1.00	46.90	O
ATOM	363	N	PRO A	61	26.158	30.917	15.517	1.00	36.25	N
ATOM	364	CA	PRO A	61	25.111	29.919	15.680	1.00	36.11	C
ATOM	365	C	PRO A	61	24.522	29.448	14.373	1.00	35.80	C
ATOM	366	O	PRO A	61	24.534	30.159	13.386	1.00	36.29	O
ATOM	367	CB	PRO A	61	24.021	30.672	16.442	1.00	36.35	C
ATOM	368	CG	PRO A	61	24.367	32.117	16.353	1.00	36.05	C
ATOM	369	CD	PRO A	61	25.790	32.228	16.061	1.00	36.10	C
ATOM	370	N	VAL A	62	23.981	28.247	14.380	1.00	35.41	N
ATOM	371	CA	VAL A	62	23.291	27.722	13.228	1.00	34.88	C
ATOM	372	C	VAL A	62	22.438	26.584	13.720	1.00	34.68	C
ATOM	373	O	VAL A	62	22.807	25.885	14.658	1.00	34.41	O
ATOM	374	CB	VAL A	62	24.237	27.189	12.156	1.00	34.79	C
ATOM	375	CG1	VAL A	62	25.108	26.062	12.695	1.00	34.66	C
ATOM	376	CG2	VAL A	62	23.440	26.693	10.996	1.00	34.83	C

ATOM	377	N	VAL	A	63	21.271	26.418	13.118	1.00	34.54	N
ATOM	378	CA	VAL	A	63	20.454	25.273	13.447	1.00	34.18	C
ATOM	379	C	VAL	A	63	20.660	24.230	12.372	1.00	33.85	C
ATOM	380	O	VAL	A	63	20.486	24.512	11.203	1.00	33.36	O
ATOM	381	CB	VAL	A	63	18.980	25.622	13.523	1.00	34.05	C
ATOM	382	CG1	VAL	A	63	18.167	24.349	13.626	1.00	34.14	C
ATOM	383	CG2	VAL	A	63	18.717	26.502	14.710	1.00	33.51	C
ATOM	384	N	LEU	A	64	21.048	23.028	12.769	1.00	33.87	N
ATOM	385	CA	LEU	A	64	21.204	21.942	11.814	1.00	34.03	C
ATOM	386	C	LEU	A	64	19.894	21.193	11.856	1.00	33.70	C
ATOM	387	O	LEU	A	64	19.368	20.956	12.932	1.00	34.18	O
ATOM	388	CB	LEU	A	64	22.417	21.071	12.164	1.00	33.90	C
ATOM	389	CG	LEU	A	64	23.667	21.978	12.155	1.00	34.85	C
ATOM	390	CD1	LEU	A	64	24.975	21.303	12.485	1.00	35.82	C
ATOM	391	CD2	LEU	A	64	23.821	22.629	10.798	1.00	35.39	C
ATOM	392	N	THR	A	65	19.314	20.887	10.704	1.00	33.36	N
ATOM	393	CA	THR	A	65	18.035	20.177	10.704	1.00	33.24	C
ATOM	394	C	THR	A	65	18.105	18.683	10.517	1.00	32.87	C
ATOM	395	O	THR	A	65	17.096	18.016	10.715	1.00	32.11	O
ATOM	396	CB	THR	A	65	17.149	20.657	9.562	1.00	33.35	C
ATOM	397	OG1	THR	A	65	17.858	20.540	8.320	1.00	33.15	O
ATOM	398	CG2	THR	A	65	16.843	22.093	9.693	1.00	33.51	C
ATOM	399	N	ASP	A	66	19.265	18.173	10.106	1.00	33.09	N
ATOM	400	CA	ASP	A	66	19.392	16.767	9.724	1.00	33.53	C
ATOM	401	C	ASP	A	66	20.629	16.019	10.189	1.00	33.55	C
ATOM	402	O	ASP	A	66	21.136	15.179	9.458	1.00	33.68	O
ATOM	403	CB	ASP	A	66	19.339	16.653	8.192	1.00	33.55	C
ATOM	404	CG	ASP	A	66	20.397	17.484	7.508	1.00	34.00	C
ATOM	405	OD1	ASP	A	66	21.124	18.232	8.188	1.00	35.03	O
ATOM	406	OD2	ASP	A	66	20.583	17.456	6.284	1.00	35.31	O
ATOM	407	N	THR	A	67	21.107	16.264	11.397	1.00	33.83	N
ATOM	408	CA	THR	A	67	22.286	15.540	11.845	1.00	33.70	C
ATOM	409	C	THR	A	67	21.937	14.177	12.340	1.00	33.84	C
ATOM	410	O	THR	A	67	22.808	13.340	12.431	1.00	34.42	O
ATOM	411	CB	THR	A	67	22.951	16.215	13.020	1.00	33.66	C
ATOM	412	OG1	THR	A	67	21.981	16.451	14.046	1.00	33.90	O
ATOM	413	CG2	THR	A	67	23.472	17.562	12.674	1.00	33.56	C
ATOM	414	N	ASN	A	68	20.686	13.954	12.719	1.00	34.00	N
ATOM	415	CA	ASN	A	68	20.320	12.676	13.312	1.00	34.15	C
ATOM	416	C	ASN	A	68	21.108	12.454	14.575	1.00	33.97	C
ATOM	417	O	ASN	A	68	21.281	11.330	15.008	1.00	33.83	O
ATOM	418	CB	ASN	A	68	20.653	11.531	12.375	1.00	34.26	C
ATOM	419	CG	ASN	A	68	19.685	11.411	11.239	1.00	35.12	C
ATOM	420	OD1	ASN	A	68	18.512	11.104	11.434	1.00	35.89	O
ATOM	421	ND2	ASN	A	68	20.168	11.649	10.033	1.00	36.88	N
ATOM	422	N	LEU	A	69	21.598	13.531	15.162	1.00	34.12	N
ATOM	423	CA	LEU	A	69	22.446	13.419	16.334	1.00	34.19	C
ATOM	424	C	LEU	A	69	21.836	12.562	17.440	1.00	34.16	C
ATOM	425	O	LEU	A	69	22.538	11.737	18.039	1.00	33.75	O
ATOM	426	CB	LEU	A	69	22.774	14.808	16.881	1.00	34.13	C
ATOM	427	CG	LEU	A	69	23.652	14.795	18.125	1.00	34.10	C
ATOM	428	CD1	LEU	A	69	24.978	14.105	17.854	1.00	34.66	C
ATOM	429	CD2	LEU	A	69	23.883	16.183	18.582	1.00	33.94	C
ATOM	430	N	VAL	A	70	20.555	12.783	17.732	1.00	34.15	N
ATOM	431	CA	VAL	A	70	19.877	12.023	18.777	1.00	34.48	C
ATOM	432	C	VAL	A	70	18.654	11.307	18.228	1.00	34.64	C
ATOM	433	O	VAL	A	70	17.600	11.223	18.865	1.00	34.46	O
ATOM	434	CB	VAL	A	70	19.540	12.899	20.003	1.00	34.61	C
ATOM	435	CG1	VAL	A	70	20.808	13.555	20.519	1.00	35.04	C
ATOM	436	CG2	VAL	A	70	18.493	13.939	19.706	1.00	34.21	C
ATOM	437	N	TYR	A	71	18.833	10.762	17.033	1.00	34.98	N

ATOM	438	CA	TYR	A	71	17.779	10.041	16.352	1.00	35.19	C
ATOM	439	C	TYR	A	71	17.051	9.086	17.305	1.00	35.24	C
ATOM	440	O	TYR	A	71	15.837	9.148	17.421	1.00	35.61	O
ATOM	441	CB	TYR	A	71	18.337	9.291	15.137	1.00	35.26	C
ATOM	442	CG	TYR	A	71	17.352	8.278	14.618	1.00	35.95	C
ATOM	443	CD1	TYR	A	71	16.155	8.696	14.055	1.00	35.96	C
ATOM	444	CD2	TYR	A	71	17.584	6.915	14.731	1.00	34.66	C
ATOM	445	CE1	TYR	A	71	15.239	7.805	13.610	1.00	35.86	C
ATOM	446	CE2	TYR	A	71	16.664	6.011	14.281	1.00	34.47	C
ATOM	447	CZ	TYR	A	71	15.485	6.463	13.724	1.00	36.06	C
ATOM	448	OH	TYR	A	71	14.518	5.589	13.248	1.00	38.92	O
ATOM	449	N	PRO	A	72	17.774	8.211	17.993	1.00	35.15	N
ATOM	450	CA	PRO	A	72	17.141	7.271	18.924	1.00	35.16	C
ATOM	451	C	PRO	A	72	16.357	7.923	20.068	1.00	35.14	C
ATOM	452	O	PRO	A	72	15.473	7.294	20.643	1.00	34.97	O
ATOM	453	CB	PRO	A	72	18.327	6.475	19.487	1.00	35.18	C
ATOM	454	CG	PRO	A	72	19.433	6.677	18.524	1.00	35.26	C
ATOM	455	CD	PRO	A	72	19.233	8.031	17.938	1.00	35.29	C
ATOM	456	N	ALA	A	73	16.657	9.169	20.401	1.00	35.18	N
ATOM	457	CA	ALA	A	73	15.967	9.803	21.512	1.00	35.21	C
ATOM	458	C	ALA	A	73	14.657	10.414	21.097	1.00	35.08	C
ATOM	459	O	ALA	A	73	13.890	10.862	21.934	1.00	34.86	O
ATOM	460	CB	ALA	A	73	16.829	10.864	22.135	1.00	35.37	C
ATOM	461	N	LEU	A	74	14.370	10.434	19.812	1.00	35.25	N
ATOM	462	CA	LEU	A	74	13.142	11.090	19.399	1.00	35.54	C
ATOM	463	C	LEU	A	74	11.903	10.434	19.958	1.00	35.66	C
ATOM	464	O	LEU	A	74	10.893	11.088	20.118	1.00	35.64	O
ATOM	465	CB	LEU	A	74	13.044	11.190	17.894	1.00	35.31	C
ATOM	466	CG	LEU	A	74	14.161	12.046	17.333	1.00	36.48	C
ATOM	467	CD1	LEU	A	74	13.887	12.277	15.890	1.00	37.76	C
ATOM	468	CD2	LEU	A	74	14.300	13.394	18.076	1.00	37.06	C
ATOM	469	N	LYS	A	75	11.979	9.151	20.282	1.00	36.19	N
ATOM	470	CA	LYS	A	75	10.795	8.453	20.767	1.00	36.36	C
ATOM	471	C	LYS	A	75	10.566	8.710	22.246	1.00	36.85	C
ATOM	472	O	LYS	A	75	9.491	8.437	22.765	1.00	37.12	O
ATOM	473	CB	LYS	A	75	10.904	6.956	20.505	1.00	36.04	C
ATOM	474	CG	LYS	A	75	12.060	6.284	21.216	1.00	35.77	C
ATOM	475	CD	LYS	A	75	12.245	4.829	20.782	1.00	34.46	C
ATOM	476	CE	LYS	A	75	13.720	4.460	20.710	1.00	33.42	C
ATOM	477	NZ	LYS	A	75	14.375	4.536	22.036	1.00	32.34	N
ATOM	478	N	TRP	A	76	11.578	9.244	22.920	1.00	37.24	N
ATOM	479	CA	TRP	A	76	11.481	9.510	24.345	1.00	37.30	C
ATOM	480	C	TRP	A	76	10.274	10.369	24.700	1.00	37.42	C
ATOM	481	O	TRP	A	76	9.917	11.306	23.984	1.00	37.54	O
ATOM	482	CB	TRP	A	76	12.728	10.247	24.838	1.00	37.12	C
ATOM	483	CG	TRP	A	76	13.980	9.446	24.816	1.00	36.77	C
ATOM	484	CD1	TRP	A	76	14.142	8.176	24.359	1.00	37.03	C
ATOM	485	CD2	TRP	A	76	15.255	9.864	25.291	1.00	36.31	C
ATOM	486	NE1	TRP	A	76	15.445	7.776	24.527	1.00	36.52	N
ATOM	487	CE2	TRP	A	76	16.147	8.801	25.097	1.00	36.08	C
ATOM	488	CE3	TRP	A	76	15.737	11.040	25.864	1.00	36.23	C
ATOM	489	CZ2	TRP	A	76	17.480	8.881	25.443	1.00	36.27	C
ATOM	490	CZ3	TRP	A	76	17.055	11.113	26.209	1.00	36.35	C
ATOM	491	CH2	TRP	A	76	17.915	10.045	25.996	1.00	36.41	C
ATOM	492	N	ASP	A	77	9.662	10.015	25.820	1.00	37.42	N
ATOM	493	CA	ASP	A	77	8.591	10.768	26.435	1.00	37.36	C
ATOM	494	C	ASP	A	77	8.707	10.370	27.907	1.00	37.09	C
ATOM	495	O	ASP	A	77	9.628	9.647	28.260	1.00	37.04	O
ATOM	496	CB	ASP	A	77	7.245	10.377	25.834	1.00	37.48	C
ATOM	497	CG	ASP	A	77	6.990	8.888	25.903	1.00	38.01	C
ATOM	498	OD1	ASP	A	77	7.704	8.191	26.658	1.00	38.42	O

ATOM	499	OD2	ASP	A	77	6.093	8.319	25.244	1.00	39.67	O
ATOM	500	N	LEU	A	78	7.789	10.798	28.763	1.00	36.79	N
ATOM	501	CA	LEU	A	78	7.913	10.496	30.182	1.00	36.49	C
ATOM	502	C	LEU	A	78	7.729	9.026	30.464	1.00	36.62	C
ATOM	503	O	LEU	A	78	8.456	8.426	31.260	1.00	36.50	O
ATOM	504	CB	LEU	A	78	6.903	11.296	30.974	1.00	36.33	C
ATOM	505	CG	LEU	A	78	7.119	12.796	30.863	1.00	36.49	C
ATOM	506	CD1	LEU	A	78	6.008	13.510	31.594	1.00	36.63	C
ATOM	507	CD2	LEU	A	78	8.494	13.194	31.399	1.00	36.10	C
ATOM	508	N	GLU	A	79	6.748	8.433	29.815	1.00	36.81	N
ATOM	509	CA	GLU	A	79	6.505	7.030	30.041	1.00	36.97	C
ATOM	510	C	GLU	A	79	7.737	6.176	29.738	1.00	36.75	C
ATOM	511	O	GLU	A	79	8.151	5.373	30.572	1.00	36.84	O
ATOM	512	CB	GLU	A	79	5.323	6.560	29.214	1.00	37.25	C
ATOM	513	CG	GLU	A	79	4.937	5.137	29.540	1.00	37.93	C
ATOM	514	CD	GLU	A	79	3.729	4.681	28.768	1.00	38.61	C
ATOM	515	OE1	GLU	A	79	3.381	5.352	27.775	1.00	38.32	O
ATOM	516	OE2	GLU	A	79	3.131	3.654	29.166	1.00	40.10	O
ATOM	517	N	TYR	A	80	8.318	6.337	28.553	1.00	36.50	N
ATOM	518	CA	TYR	A	80	9.489	5.549	28.176	1.00	36.32	C
ATOM	519	C	TYR	A	80	10.644	5.804	29.123	1.00	36.27	C
ATOM	520	O	TYR	A	80	11.343	4.872	29.516	1.00	36.15	O
ATOM	521	CB	TYR	A	80	9.921	5.889	26.751	1.00	36.39	C
ATOM	522	CG	TYR	A	80	11.180	5.202	26.228	1.00	36.06	C
ATOM	523	CD1	TYR	A	80	11.100	4.000	25.557	1.00	36.22	C
ATOM	524	CD2	TYR	A	80	12.432	5.793	26.349	1.00	35.91	C
ATOM	525	CE1	TYR	A	80	12.225	3.380	25.051	1.00	36.52	C
ATOM	526	CE2	TYR	A	80	13.568	5.179	25.844	1.00	36.04	C
ATOM	527	CZ	TYR	A	80	13.454	3.967	25.190	1.00	36.46	C
ATOM	528	OH	TYR	A	80	14.561	3.321	24.673	1.00	35.81	O
ATOM	529	N	LEU	A	81	10.846	7.064	29.493	1.00	36.13	N
ATOM	530	CA	LEU	A	81	11.971	7.408	30.353	1.00	36.22	C
ATOM	531	C	LEU	A	81	11.777	6.827	31.747	1.00	36.13	C
ATOM	532	O	LEU	A	81	12.706	6.259	32.325	1.00	35.90	O
ATOM	533	CB	LEU	A	81	12.208	8.930	30.406	1.00	36.22	C
ATOM	534	CG	LEU	A	81	12.774	9.568	29.121	1.00	36.35	C
ATOM	535	CD1	LEU	A	81	12.880	11.055	29.274	1.00	36.49	C
ATOM	536	CD2	LEU	A	81	14.132	9.017	28.718	1.00	36.18	C
ATOM	537	N	GLN	A	82	10.569	6.956	32.280	1.00	36.15	N
ATOM	538	CA	GLN	A	82	10.284	6.424	33.597	1.00	36.29	C
ATOM	539	C	GLN	A	82	10.575	4.927	33.605	1.00	36.25	C
ATOM	540	O	GLN	A	82	11.210	4.408	34.515	1.00	35.96	O
ATOM	541	CB	GLN	A	82	8.838	6.710	33.976	1.00	36.38	C
ATOM	542	CG	GLN	A	82	8.418	6.080	35.279	1.00	37.00	C
ATOM	543	CD	GLN	A	82	7.191	6.740	35.872	1.00	37.85	C
ATOM	544	OE1	GLN	A	82	6.640	7.676	35.295	1.00	38.24	O
ATOM	545	NE2	GLN	A	82	6.754	6.247	37.020	1.00	38.93	N
ATOM	546	N	GLU	A	83	10.136	4.240	32.560	1.00	36.46	N
ATOM	547	CA	GLU	A	83	10.366	2.807	32.451	1.00	36.59	C
ATOM	548	C	GLU	A	83	11.843	2.424	32.307	1.00	36.50	C
ATOM	549	O	GLU	A	83	12.228	1.321	32.677	1.00	36.55	O
ATOM	550	CB	GLU	A	83	9.568	2.237	31.271	1.00	36.57	C
ATOM	551	CG	GLU	A	83	9.497	0.714	31.239	1.00	36.95	C
ATOM	552	CD	GLU	A	83	8.732	0.107	32.416	1.00	37.61	C
ATOM	553	OE1	GLU	A	83	7.922	0.815	33.050	1.00	37.88	O
ATOM	554	OE2	GLU	A	83	8.938	−1.090	32.719	1.00	37.54	O
ATOM	555	N	ASN	A	84	12.680	3.324	31.805	1.00	36.58	N
ATOM	556	CA	ASN	A	84	14.049	2.936	31.476	1.00	36.62	C
ATOM	557	C	ASN	A	84	15.210	3.749	32.001	1.00	36.66	C
ATOM	558	O	ASN	A	84	16.349	3.310	31.900	1.00	36.62	O
ATOM	559	CB	ASN	A	84	14.211	2.936	29.960	1.00	36.62	C

ATOM	560	CG	ASN A	84	13.362	1.902	29.286	1.00	36.37	C
ATOM	561	OD1	ASN A	84	13.352	0.733	29.683	1.00	36.46	O
ATOM	562	ND2	ASN A	84	12.644	2.317	28.247	1.00	35.65	N
ATOM	563	N	ILE A	85	14.975	4.920	32.557	1.00	36.80	N
ATOM	564	CA	ILE A	85	16.125	5.730	32.885	1.00	37.13	C
ATOM	565	C	ILE A	85	16.834	5.365	34.180	1.00	37.28	C
ATOM	566	O	ILE A	85	17.793	6.022	34.568	1.00	37.74	O
ATOM	567	CB	ILE A	85	15.752	7.184	32.874	1.00	37.21	C
ATOM	568	CG1	ILE A	85	16.958	8.009	32.445	1.00	37.55	C
ATOM	569	CG2	ILE A	85	15.241	7.593	34.222	1.00	37.38	C
ATOM	570	CD1	ILE A	85	16.623	9.467	32.195	1.00	37.68	C
ATOM	571	N	GLY A	86	16.383	4.326	34.855	1.00	37.29	N
ATOM	572	CA	GLY A	86	17.089	3.892	36.038	1.00	37.39	C
ATOM	573	C	GLY A	86	16.553	4.496	37.308	1.00	37.43	C
ATOM	574	O	GLY A	86	15.583	5.265	37.290	1.00	37.34	O
ATOM	575	N	ASN A	87	17.212	4.167	38.414	1.00	37.34	N
ATOM	576	CA	ASN A	87	16.750	4.602	39.716	1.00	37.42	C
ATOM	577	C	ASN A	87	17.701	5.603	40.357	1.00	37.39	C
ATOM	578	O	ASN A	87	17.740	5.742	41.578	1.00	37.39	O
ATOM	579	CB	ASN A	87	16.545	3.399	40.612	1.00	37.40	C
ATOM	580	N	GLY A	88	18.451	6.321	39.529	1.00	37.47	N
ATOM	581	CA	GLY A	88	19.405	7.296	40.028	1.00	37.41	C
ATOM	582	C	GLY A	88	18.686	8.554	40.450	1.00	37.30	C
ATOM	583	O	GLY A	88	17.500	8.709	40.171	1.00	37.36	O
ATOM	584	N	ASP A	89	19.390	9.453	41.125	1.00	37.26	N
ATOM	585	CA	ASP A	89	18.780	10.716	41.531	1.00	37.21	C
ATOM	586	C	ASP A	89	18.726	11.681	40.355	1.00	36.91	C
ATOM	587	O	ASP A	89	19.607	11.654	39.500	1.00	36.62	O
ATOM	588	CB	ASP A	89	19.563	11.346	42.680	1.00	37.24	C
ATOM	589	CG	ASP A	89	19.277	10.690	44.000	1.00	37.24	C
ATOM	590	OD1	ASP A	89	18.398	9.802	44.044	1.00	37.14	O
ATOM	591	OD2	ASP A	89	19.876	11.002	45.047	1.00	37.98	O
ATOM	592	N	PHE A	90	17.667	12.492	40.295	1.00	36.88	N
ATOM	593	CA	PHE A	90	17.554	13.570	39.298	1.00	36.87	C
ATOM	594	C	PHE A	90	17.327	14.926	39.942	1.00	36.79	C
ATOM	595	O	PHE A	90	16.455	15.080	40.795	1.00	36.69	O
ATOM	596	CB	PHE A	90	16.420	13.308	38.321	1.00	36.70	C
ATOM	597	CG	PHE A	90	16.712	12.210	37.371	1.00	36.83	C
ATOM	598	CD1	PHE A	90	16.551	10.901	37.757	1.00	36.07	C
ATOM	599	CD2	PHE A	90	17.191	12.479	36.102	1.00	37.27	C
ATOM	600	CE1	PHE A	90	16.827	9.885	36.899	1.00	35.81	C
ATOM	601	CE2	PHE A	90	17.475	11.449	35.238	1.00	36.82	C
ATOM	602	CZ	PHE A	90	17.291	10.150	35.642	1.00	36.06	C
ATOM	603	N	SER A	91	18.123	15.905	39.529	1.00	36.92	N
ATOM	604	CA	SER A	91	17.971	17.266	40.027	1.00	36.99	C
ATOM	605	C	SER A	91	16.738	17.923	39.428	1.00	37.10	C
ATOM	606	O	SER A	91	16.586	17.985	38.206	1.00	36.78	O
ATOM	607	CB	SER A	91	19.200	18.105	39.699	1.00	36.86	C
ATOM	608	OG	SER A	91	20.350	17.616	40.358	1.00	36.54	O
ATOM	609	N	VAL A	92	15.857	18.402	40.303	1.00	37.42	N
ATOM	610	CA	VAL A	92	14.660	19.106	39.876	1.00	37.75	C
ATOM	611	C	VAL A	92	14.509	20.468	40.545	1.00	38.10	C
ATOM	612	O	VAL A	92	14.472	20.589	41.768	1.00	38.08	O
ATOM	613	CB	VAL A	92	13.406	18.303	40.159	1.00	37.63	C
ATOM	614	CG1	VAL A	92	12.197	19.034	39.621	1.00	37.42	C
ATOM	615	CG2	VAL A	92	13.515	16.946	39.527	1.00	37.78	C
ATOM	616	N	TYR A	93	14.384	21.487	39.709	1.00	38.59	N
ATOM	617	CA	TYR A	93	14.220	22.849	40.166	1.00	38.91	C
ATOM	618	C	TYR A	93	12.784	23.173	40.219	1.00	39.41	C
ATOM	619	O	TYR A	93	12.019	22.786	39.343	1.00	39.64	O
ATOM	620	CB	TYR A	93	14.883	23.799	39.202	1.00	38.84	C

ATOM	621	CG	TYR A	93	16.332	23.588	39.288	1.00	38.25	C
ATOM	622	CD1	TYR A	93	17.044	24.122	40.334	1.00	38.21	C
ATOM	623	CD2	TYR A	93	16.968	22.750	38.415	1.00	37.50	C
ATOM	624	CE1	TYR A	93	18.362	23.893	40.464	1.00	37.90	C
ATOM	625	CE2	TYR A	93	18.287	22.512	38.534	1.00	37.82	C
ATOM	626	CZ	TYR A	93	18.987	23.090	39.557	1.00	37.78	C
ATOM	627	OH	TYR A	93	20.322	22.836	39.677	1.00	39.39	O
ATOM	628	N	SER A	94	12.422	23.935	41.228	1.00	40.00	N
ATOM	629	CA	SER A	94	11.043	24.274	41.416	1.00	40.51	C
ATOM	630	C	SER A	94	11.020	25.773	41.426	1.00	40.68	C
ATOM	631	O	SER A	94	11.962	26.384	41.896	1.00	41.00	O
ATOM	632	CB	SER A	94	10.539	23.693	42.730	1.00	40.58	C
ATOM	633	OG	SER A	94	9.139	23.874	42.858	1.00	41.30	O
ATOM	634	N	ALA A	95	9.974	26.374	40.878	1.00	40.87	N
ATOM	635	CA	ALA A	95	9.899	27.824	40.856	1.00	40.91	C
ATOM	636	C	ALA A	95	8.483	28.343	40.826	1.00	41.03	C
ATOM	637	O	ALA A	95	7.573	27.699	40.309	1.00	41.09	O
ATOM	638	CB	ALA A	95	10.630	28.350	39.668	1.00	40.93	C
ATOM	639	N	SER A	96	8.328	29.549	41.350	1.00	41.12	N
ATOM	640	CA	SER A	96	7.034	30.200	41.413	1.00	41.05	C
ATOM	641	C	SER A	96	6.834	31.208	40.305	1.00	40.72	C
ATOM	642	O	SER A	96	5.833	31.912	40.277	1.00	40.86	O
ATOM	643	CB	SER A	96	6.902	30.938	42.731	1.00	41.16	C
ATOM	644	OG	SER A	96	5.767	31.779	42.693	1.00	41.90	O
ATOM	645	N	THR A	97	7.808	31.314	39.423	1.00	40.34	N
ATOM	646	CA	THR A	97	7.710	32.209	38.292	1.00	40.18	C
ATOM	647	C	THR A	97	8.073	31.368	37.113	1.00	39.72	C
ATOM	648	O	THR A	97	8.582	30.274	37.279	1.00	39.83	O
ATOM	649	CB	THR A	97	8.732	33.336	38.393	1.00	40.49	C
ATOM	650	OG1	THR A	97	8.905	33.946	37.105	1.00	41.00	O
ATOM	651	CG2	THR A	97	10.145	32.779	38.718	1.00	40.86	C
ATOM	652	N	HIS A	98	7.862	31.874	35.915	1.00	39.32	N
ATOM	653	CA	HIS A	98	8.257	31.112	34.754	1.00	39.12	C
ATOM	654	C	HIS A	98	9.765	31.163	34.543	1.00	39.41	C
ATOM	655	O	HIS A	98	10.299	30.423	33.711	1.00	39.15	O
ATOM	656	CB	HIS A	98	7.576	31.646	33.516	1.00	38.95	C
ATOM	657	CG	HIS A	98	7.807	33.104	33.290	1.00	38.64	C
ATOM	658	ND1	HIS A	98	7.095	34.081	33.950	1.00	37.36	N
ATOM	659	CD2	HIS A	98	8.672	33.753	32.477	1.00	38.57	C
ATOM	660	CE1	HIS A	98	7.509	35.268	33.550	1.00	37.33	C
ATOM	661	NE2	HIS A	98	8.463	35.098	32.654	1.00	37.37	N
ATOM	662	N	LYS A	99	10.452	32.021	35.294	1.00	39.52	N
ATOM	663	CA	LYS A	99	11.881	32.184	35.105	1.00	39.98	C
ATOM	664	C	LYS A	99	12.749	31.364	36.029	1.00	40.38	C
ATOM	665	O	LYS A	99	12.744	31.554	37.246	1.00	40.33	O
ATOM	666	CB	LYS A	99	12.281	33.631	35.297	1.00	40.10	C
ATOM	667	CG	LYS A	99	11.814	34.527	34.219	1.00	40.15	C
ATOM	668	CD	LYS A	99	12.537	35.820	34.337	1.00	40.36	C
ATOM	669	CE	LYS A	99	11.725	36.835	35.072	1.00	41.10	C
ATOM	670	NZ	LYS A	99	10.975	37.655	34.074	1.00	41.52	N
ATOM	671	N	PHE A	100	13.541	30.486	35.433	1.00	40.77	N
ATOM	672	CA	PHE A	100	14.450	29.665	36.201	1.00	41.12	C
ATOM	673	C	PHE A	100	15.893	30.159	36.218	1.00	41.78	C
ATOM	674	O	PHE A	100	16.808	29.463	35.765	1.00	42.13	O
ATOM	675	CB	PHE A	100	14.418	28.255	35.658	1.00	40.86	C
ATOM	676	CG	PHE A	100	13.211	27.494	36.060	1.00	40.53	C
ATOM	677	CD1	PHE A	100	12.040	27.604	35.344	1.00	39.76	C
ATOM	678	CD2	PHE A	100	13.249	26.666	37.159	1.00	39.54	C
ATOM	679	CE1	PHE A	100	10.942	26.890	35.707	1.00	39.56	C
ATOM	680	CE2	PHE A	100	12.155	25.955	37.526	1.00	39.79	C
ATOM	681	CZ	PHE A	100	10.995	26.064	36.802	1.00	39.91	C

ATOM	682	N	LEU A 101	16.124	31.347	36.747	1.00 42.23	N
ATOM	683	CA	LEU A 101	17.501	31.800	36.868	1.00 42.74	C
ATOM	684	C	LEU A 101	18.429	30.780	37.567	1.00 43.27	C
ATOM	685	O	LEU A 101	18.213	30.392	38.736	1.00 43.22	O
ATOM	686	CB	LEU A 101	17.549	33.097	37.657	1.00 42.90	C
ATOM	687	CG	LEU A 101	18.900	33.800	37.793	1.00 43.35	C
ATOM	688	CD1	LEU A 101	19.441	34.288	36.455	1.00 43.59	C
ATOM	689	CD2	LEU A 101	18.703	34.967	38.724	1.00 43.91	C
ATOM	690	N	TYR A 102	19.470	30.379	36.836	1.00 43.59	N
ATOM	691	CA	TYR A 102	20.547	29.522	37.340	1.00 43.71	C
ATOM	692	C	TYR A 102	21.380	30.186	38.460	1.00 43.57	C
ATOM	693	O	TYR A 102	21.746	31.364	38.343	1.00 44.09	O
ATOM	694	CB	TYR A 102	21.531	29.218	36.193	1.00 43.90	C
ATOM	695	CG	TYR A 102	22.703	28.421	36.700	1.00 44.68	C
ATOM	696	CD1	TYR A 102	22.553	27.080	37.033	1.00 44.29	C
ATOM	697	CD2	TYR A 102	23.935	29.023	36.918	1.00 44.88	C
ATOM	698	CE1	TYR A 102	23.602	26.358	37.541	1.00 44.98	C
ATOM	699	CE2	TYR A 102	24.987	28.309	37.422	1.00 45.44	C
ATOM	700	CZ	TYR A 102	24.826	26.984	37.735	1.00 45.86	C
ATOM	701	OH	TYR A 102	25.922	26.313	38.237	1.00 47.07	O
ATOM	702	N	TYR A 103	21.704	29.451	39.523	1.00 42.91	N
ATOM	703	CA	TYR A 103	22.642	29.970	40.527	1.00 42.67	C
ATOM	704	C	TYR A 103	23.561	28.895	41.102	1.00 41.98	C
ATOM	705	O	TYR A 103	23.165	27.768	41.351	1.00 41.99	O
ATOM	706	CB	TYR A 103	21.922	30.638	41.670	1.00 42.83	C
ATOM	707	CG	TYR A 103	20.974	29.692	42.265	1.00 44.33	C
ATOM	708	CD1	TYR A 103	19.770	29.454	41.646	1.00 46.69	C
ATOM	709	CD2	TYR A 103	21.306	28.959	43.390	1.00 45.99	C
ATOM	710	CE1	TYR A 103	18.880	28.539	42.147	1.00 47.83	C
ATOM	711	CE2	TYR A 103	20.426	28.045	43.917	1.00 47.23	C
ATOM	712	CZ	TYR A 103	19.203	27.836	43.284	1.00 48.65	C
ATOM	713	OH	TYR A 103	18.287	26.921	43.774	1.00 51.36	O
ATOM	714	N	ASP A 104	24.786	29.300	41.369	1.00 41.25	N
ATOM	715	CA	ASP A 104	25.829	28.399	41.764	1.00 40.65	C
ATOM	716	C	ASP A 104	25.924	28.335	43.267	1.00 40.45	C
ATOM	717	O	ASP A 104	26.430	29.240	43.924	1.00 40.13	O
ATOM	718	CB	ASP A 104	27.110	28.904	41.142	1.00 40.60	C
ATOM	719	CG	ASP A 104	28.306	28.117	41.548	1.00 41.02	C
ATOM	720	OD1	ASP A 104	28.270	27.482	42.629	1.00 42.21	O
ATOM	721	OD2	ASP A 104	29.337	28.095	40.838	1.00 40.68	O
ATOM	722	N	GLU A 105	25.446	27.222	43.801	1.00 40.41	N
ATOM	723	CA	GLU A 105	25.368	27.029	45.231	1.00 40.21	C
ATOM	724	C	GLU A 105	26.734	27.234	45.895	1.00 39.89	C
ATOM	725	O	GLU A 105	26.803	27.738	47.021	1.00 39.65	O
ATOM	726	CB	GLU A 105	24.769	25.643	45.528	1.00 40.44	C
ATOM	727	CG	GLU A 105	23.247	25.572	45.351	1.00 41.43	C
ATOM	728	CD	GLU A 105	22.708	24.150	45.207	1.00 42.48	C
ATOM	729	OE1	GLU A 105	23.138	23.269	45.986	1.00 43.10	O
ATOM	730	OE2	GLU A 105	21.842	23.914	44.322	1.00 42.00	O
ATOM	731	N	LYS A 106	27.824	26.899	45.204	1.00 39.58	N
ATOM	732	CA	LYS A 106	29.141	27.042	45.831	1.00 39.58	C
ATOM	733	C	LYS A 106	29.427	28.469	46.190	1.00 39.64	C
ATOM	734	O	LYS A 106	30.165	28.730	47.128	1.00 39.93	O
ATOM	735	CB	LYS A 106	30.302	26.592	44.945	1.00 39.49	C
ATOM	736	CG	LYS A 106	30.444	25.096	44.731	1.00 39.29	C
ATOM	737	N	LYS A 107	28.856	29.397	45.438	1.00 39.68	N
ATOM	738	CA	LYS A 107	29.140	30.794	45.663	1.00 39.58	C
ATOM	739	C	LYS A 107	28.151	31.452	46.607	1.00 40.18	C
ATOM	740	O	LYS A 107	28.279	32.637	46.883	1.00 40.30	O
ATOM	741	CB	LYS A 107	29.161	31.531	44.325	1.00 39.46	C
ATOM	742	CG	LYS A 107	30.390	31.199	43.455	1.00 38.46	C

ATOM	743	CD	LYS A 107	30.299	31.737	42.029	1.00	36.98	C
ATOM	744	CE	LYS A 107	31.643	31.632	41.292	1.00	36.36	C
ATOM	745	NZ	LYS A 107	31.553	31.935	39.819	1.00	35.12	N
ATOM	746	N	MET A 108	27.197	30.697	47.148	1.00	40.92	N
ATOM	747	CA	MET A 108	26.165	31.316	47.978	1.00	41.42	C
ATOM	748	C	MET A 108	26.675	31.937	49.258	1.00	42.03	C
ATOM	749	O	MET A 108	26.142	32.952	49.704	1.00	42.33	O
ATOM	750	CB	MET A 108	25.006	30.366	48.210	1.00	41.31	C
ATOM	751	CG	MET A 108	24.285	30.179	46.892	1.00	41.95	C
ATOM	752	SD	MET A 108	22.861	29.100	46.846	1.00	43.29	S
ATOM	753	CE	MET A 108	21.737	30.010	48.064	1.00	43.04	C
ATOM	754	N	ALA A 109	27.737	31.382	49.816	1.00	42.84	N
ATOM	755	CA	ALA A 109	28.282	31.912	51.064	1.00	43.65	C
ATOM	756	C	ALA A 109	28.655	33.387	50.963	1.00	44.40	C
ATOM	757	O	ALA A 109	28.321	34.195	51.823	1.00	44.44	O
ATOM	758	CB	ALA A 109	29.486	31.107	51.476	1.00	43.66	C
ATOM	759	N	ASN A 110	29.332	33.729	49.882	1.00	45.46	N
ATOM	760	CA	ASN A 110	29.817	35.084	49.665	1.00	46.25	C
ATOM	761	C	ASN A 110	28.789	36.154	49.317	1.00	46.26	C
ATOM	762	O	ASN A 110	29.163	37.304	49.066	1.00	46.51	O
ATOM	763	CB	ASN A 110	30.841	35.036	48.543	1.00	46.62	C
ATOM	764	CG	ASN A 110	32.024	34.145	48.886	1.00	47.94	C
ATOM	765	OD1	ASN A 110	32.474	34.093	50.045	1.00	48.12	O
ATOM	766	ND2	ASN A 110	32.530	33.432	47.883	1.00	48.75	N
ATOM	767	N	PHE A 111	27.517	35.786	49.228	1.00	46.12	N
ATOM	768	CA	PHE A 111	26.470	36.795	49.057	1.00	45.97	C
ATOM	769	C	PHE A 111	25.267	36.385	49.889	1.00	46.17	C
ATOM	770	O	PHE A 111	24.217	36.002	49.361	1.00	46.25	O
ATOM	771	CB	PHE A 111	26.072	36.978	47.599	1.00	45.55	C
ATOM	772	CG	PHE A 111	27.076	37.718	46.777	1.00	44.32	C
ATOM	773	CD1	PHE A 111	28.269	37.123	46.419	1.00	43.65	C
ATOM	774	CD2	PHE A 111	26.808	39.000	46.320	1.00	44.04	C
ATOM	775	CE1	PHE A 111	29.187	37.794	45.620	1.00	43.19	C
ATOM	776	CE2	PHE A 111	27.715	39.673	45.522	1.00	43.22	C
ATOM	777	CZ	PHE A 111	28.911	39.068	45.177	1.00	43.00	C
ATOM	778	N	GLN A 112	25.434	36.479	51.200	1.00	46.35	N
ATOM	779	CA	GLN A 112	24.401	36.052	52.130	1.00	46.52	C
ATOM	780	C	GLN A 112	23.040	36.638	51.754	1.00	46.68	C
ATOM	781	O	GLN A 112	22.019	35.995	51.968	1.00	46.87	O
ATOM	782	CB	GLN A 112	24.774	36.438	53.567	1.00	46.62	C
ATOM	783	CG	GLN A 112	26.201	36.060	53.998	1.00	46.96	C
ATOM	784	CD	GLN A 112	26.418	34.554	54.125	1.00	48.05	C
ATOM	785	OE1	GLN A 112	25.834	33.762	53.372	1.00	47.89	O
ATOM	786	NE2	GLN A 112	27.271	34.158	55.075	1.00	48.55	N
ATOM	787	N	ASN A 113	23.019	37.836	51.168	1.00	46.80	N
ATOM	788	CA	ASN A 113	21.750	38.463	50.793	1.00	46.89	C
ATOM	789	C	ASN A 113	21.104	37.951	49.517	1.00	47.08	C
ATOM	790	O	ASN A 113	20.105	38.521	49.077	1.00	47.55	O
ATOM	791	CB	ASN A 113	21.898	39.976	50.682	1.00	46.69	C
ATOM	792	CG	ASN A 113	22.258	40.604	52.001	1.00	46.91	C
ATOM	793	OD1	ASN A 113	22.085	39.982	53.055	1.00	46.08	O
ATOM	794	ND2	ASN A 113	22.767	41.837	51.962	1.00	46.59	N
ATOM	795	N	PHE A 114	21.651	36.908	48.903	1.00	47.08	N
ATOM	796	CA	PHE A 114	21.012	36.379	47.706	1.00	47.01	C
ATOM	797	C	PHE A 114	19.986	35.364	48.145	1.00	47.11	C
ATOM	798	O	PHE A 114	20.293	34.449	48.916	1.00	47.34	O
ATOM	799	CB	PHE A 114	21.995	35.713	46.764	1.00	46.83	C
ATOM	800	CG	PHE A 114	21.342	35.132	45.555	1.00	47.03	C
ATOM	801	CD1	PHE A 114	20.674	35.953	44.655	1.00	47.22	C
ATOM	802	CD2	PHE A 114	21.376	33.761	45.318	1.00	47.97	C
ATOM	803	CE1	PHE A 114	20.060	35.422	43.522	1.00	47.53	C

ATOM	804	CE2	PHE	A	114	20.763	33.212	44.177	1.00	47.83	C
ATOM	805	CZ	PHE	A	114	20.104	34.044	43.282	1.00	47.67	C
ATOM	806	N	LYS	A	115	18.763	35.530	47.662	1.00	46.94	N
ATOM	807	CA	LYS	A	115	17.683	34.628	48.029	1.00	46.64	C
ATOM	808	C	LYS	A	115	17.109	34.063	46.744	1.00	46.38	C
ATOM	809	O	LYS	A	115	16.351	34.744	46.046	1.00	46.75	O
ATOM	810	CB	LYS	A	115	16.613	35.372	48.835	1.00	46.60	C
ATOM	811	N	PRO	A	116	17.445	32.813	46.449	1.00	45.84	N
ATOM	812	CA	PRO	A	116	17.079	32.192	45.165	1.00	45.70	C
ATOM	813	C	PRO	A	116	15.576	32.139	44.937	1.00	45.44	C
ATOM	814	O	PRO	A	116	14.827	31.956	45.892	1.00	45.46	O
ATOM	815	CB	PRO	A	116	17.640	30.761	45.260	1.00	45.71	C
ATOM	816	CG	PRO	A	116	18.435	30.689	46.536	1.00	45.66	C
ATOM	817	CD	PRO	A	116	18.137	31.890	47.359	1.00	45.75	C
ATOM	818	N	ARG	A	117	15.154	32.307	43.688	1.00	45.27	N
ATOM	819	CA	ARG	A	117	13.742	32.232	43.332	1.00	45.16	C
ATOM	820	C	ARG	A	117	13.291	30.791	43.104	1.00	45.12	C
ATOM	821	O	ARG	A	117	12.096	30.500	43.207	1.00	45.48	O
ATOM	822	CB	ARG	A	117	13.467	33.059	42.097	1.00	45.26	C
ATOM	823	N	SER	A	118	14.238	29.902	42.796	1.00	44.78	N
ATOM	824	CA	SER	A	118	13.944	28.480	42.594	1.00	44.60	C
ATOM	825	C	SER	A	118	14.782	27.583	43.509	1.00	44.63	C
ATOM	826	O	SER	A	118	15.925	27.921	43.816	1.00	45.32	O
ATOM	827	CB	SER	A	118	14.303	28.072	41.184	1.00	44.44	C
ATOM	828	OG	SER	A	118	15.651	27.624	41.186	1.00	44.35	O
ATOM	829	N	ASN	A	119	14.241	26.428	43.899	1.00	44.11	N
ATOM	830	CA	ASN	A	119	14.969	25.472	44.728	1.00	43.72	C
ATOM	831	C	ASN	A	119	15.295	24.196	43.953	1.00	43.16	C
ATOM	832	O	ASN	A	119	14.576	23.821	43.030	1.00	43.23	O
ATOM	833	CB	ASN	A	119	14.147	25.078	45.955	1.00	44.03	C
ATOM	834	CG	ASN	A	119	13.514	26.264	46.646	1.00	44.80	C
ATOM	835	OD1	ASN	A	119	14.207	27.129	47.197	1.00	46.56	O
ATOM	836	ND2	ASN	A	119	12.184	26.303	46.640	1.00	45.18	N
ATOM	837	N	ARG	A	120	16.380	23.533	44.337	1.00	42.37	N
ATOM	838	CA	ARG	A	120	16.778	22.278	43.716	1.00	41.69	C
ATOM	839	C	ARG	A	120	16.368	21.162	44.656	1.00	41.20	C
ATOM	840	O	ARG	A	120	16.577	21.267	45.859	1.00	41.46	O
ATOM	841	CB	ARG	A	120	18.299	22.239	43.504	1.00	41.70	C
ATOM	842	CG	ARG	A	120	18.827	21.002	42.754	1.00	40.96	C
ATOM	843	CD	ARG	A	120	20.351	20.897	42.683	1.00	39.92	C
ATOM	844	NE	ARG	A	120	21.001	21.327	43.920	1.00	39.89	N
ATOM	845	CZ	ARG	A	120	21.337	20.523	44.921	1.00	39.57	C
ATOM	846	NH1	ARG	A	120	21.084	19.217	44.856	1.00	39.43	N
ATOM	847	NH2	ARG	A	120	21.930	21.027	45.998	1.00	39.06	N
ATOM	848	N	GLU	A	121	15.769	20.109	44.115	1.00	40.44	N
ATOM	849	CA	GLU	A	121	15.380	18.956	44.908	1.00	39.92	C
ATOM	850	C	GLU	A	121	15.840	17.702	44.161	1.00	39.36	C
ATOM	851	O	GLU	A	121	15.716	17.617	42.942	1.00	39.20	O
ATOM	852	CB	GLU	A	121	13.866	18.950	45.170	1.00	39.97	C
ATOM	853	CG	GLU	A	121	13.369	17.698	45.876	1.00	40.42	C
ATOM	854	CD	GLU	A	121	12.136	17.928	46.731	1.00	41.22	C
ATOM	855	OE1	GLU	A	121	12.291	18.365	47.890	1.00	41.90	O
ATOM	856	OE2	GLU	A	121	11.016	17.645	46.259	1.00	42.21	O
ATOM	857	N	GLU	A	122	16.414	16.752	44.889	1.00	38.78	N
ATOM	858	CA	GLU	A	122	16.879	15.519	44.285	1.00	38.34	C
ATOM	859	C	GLU	A	122	15.760	14.523	44.374	1.00	38.13	C
ATOM	860	O	GLU	A	122	15.171	14.353	45.435	1.00	38.09	O
ATOM	861	CB	GLU	A	122	18.092	14.989	45.025	1.00	38.08	C
ATOM	862	CG	GLU	A	122	19.263	15.928	44.936	1.00	38.04	C
ATOM	863	CD	GLU	A	122	19.581	16.289	43.497	1.00	39.25	C
ATOM	864	OE1	GLU	A	122	19.763	15.364	42.667	1.00	38.89	O

ATOM	865	OE2	GLU	A	122	19.627	17.501	43.183	1.00	40.06	O
ATOM	866	N	MET	A	123	15.434	13.879	43.265	1.00	37.93	N
ATOM	867	CA	MET	A	123	14.384	12.885	43.312	1.00	37.84	C
ATOM	868	C	MET	A	123	14.536	11.819	42.242	1.00	37.41	C
ATOM	869	O	MET	A	123	15.418	11.876	41.387	1.00	37.04	O
ATOM	870	CB	MET	A	123	13.021	13.565	43.225	1.00	38.01	C
ATOM	871	CG	MET	A	123	12.798	14.318	41.946	1.00	39.05	C
ATOM	872	SD	MET	A	123	11.177	15.064	41.910	1.00	41.38	S
ATOM	873	CE	MET	A	123	11.489	16.589	42.818	1.00	41.39	C
ATOM	874	N	LYS	A	124	13.675	10.820	42.332	1.00	37.17	N
ATOM	875	CA	LYS	A	124	13.692	9.715	41.401	1.00	36.98	C
ATOM	876	C	LYS	A	124	12.802	10.098	40.238	1.00	36.81	C
ATOM	877	O	LYS	A	124	11.814	10.813	40.402	1.00	36.91	O
ATOM	878	CB	LYS	A	124	13.213	8.434	42.087	1.00	36.82	C
ATOM	879	CG	LYS	A	124	14.081	7.989	43.281	1.00	36.79	C
ATOM	880	CD	LYS	A	124	15.488	7.553	42.856	1.00	36.83	C
ATOM	881	CE	LYS	A	124	16.390	7.206	44.031	1.00	36.89	C
ATOM	882	NZ	LYS	A	124	17.822	7.412	43.680	1.00	36.99	N
ATOM	883	N	PHE	A	125	13.145	9.622	39.056	1.00	36.49	N
ATOM	884	CA	PHE	A	125	12.416	10.031	37.885	1.00	36.33	C
ATOM	885	C	PHE	A	125	10.926	9.861	38.074	1.00	36.45	C
ATOM	886	O	PHE	A	125	10.143	10.743	37.732	1.00	36.30	O
ATOM	887	CB	PHE	A	125	12.879	9.270	36.665	1.00	36.24	C
ATOM	888	CG	PHE	A	125	12.555	9.967	35.407	1.00	36.21	C
ATOM	889	CD1	PHE	A	125	13.403	10.936	34.924	1.00	35.98	C
ATOM	890	CD2	PHE	A	125	11.374	9.714	34.743	1.00	36.15	C
ATOM	891	CE1	PHE	A	125	13.108	11.616	33.794	1.00	36.07	C
ATOM	892	CE2	PHE	A	125	11.073	10.390	33.597	1.00	36.71	C
ATOM	893	CZ	PHE	A	125	11.943	11.350	33.120	1.00	36.73	C
ATOM	894	N	HIS	A	126	10.527	8.733	38.640	1.00	36.80	N
ATOM	895	CA	HIS	A	126	9.111	8.492	38.845	1.00	36.98	C
ATOM	896	C	HIS	A	126	8.547	9.560	39.772	1.00	37.20	C
ATOM	897	O	HIS	A	126	7.376	9.923	39.669	1.00	37.15	O
ATOM	898	CB	HIS	A	126	8.845	7.080	39.390	1.00	36.97	C
ATOM	899	CG	HIS	A	126	8.990	6.946	40.877	1.00	36.62	C
ATOM	900	ND1	HIS	A	126	7.935	7.115	41.747	1.00	35.91	N
ATOM	901	CD2	HIS	A	126	10.058	6.618	41.644	1.00	36.38	C
ATOM	902	CE1	HIS	A	126	8.352	6.921	42.986	1.00	35.63	C
ATOM	903	NE2	HIS	A	126	9.636	6.619	42.951	1.00	35.43	N
ATOM	904	N	GLU	A	127	9.383	10.082	40.663	1.00	37.34	N
ATOM	905	CA	GLU	A	127	8.912	11.087	41.599	1.00	37.55	C
ATOM	906	C	GLU	A	127	8.657	12.379	40.835	1.00	37.54	C
ATOM	907	O	GLU	A	127	7.657	13.061	41.049	1.00	37.36	O
ATOM	908	CB	GLU	A	127	9.914	11.308	42.736	1.00	37.65	C
ATOM	909	CG	GLU	A	127	10.155	10.091	43.617	1.00	37.89	C
ATOM	910	CD	GLU	A	127	11.113	10.383	44.764	1.00	38.14	C
ATOM	911	OE1	GLU	A	127	12.330	10.531	44.520	1.00	37.77	O
ATOM	912	OE2	GLU	A	127	10.649	10.471	45.917	1.00	38.86	O
ATOM	913	N	PHE	A	128	9.557	12.702	39.920	1.00	37.65	N
ATOM	914	CA	PHE	A	128	9.393	13.904	39.127	1.00	37.81	C
ATOM	915	C	PHE	A	128	8.090	13.798	38.350	1.00	37.95	C
ATOM	916	O	PHE	A	128	7.280	14.726	38.342	1.00	37.90	O
ATOM	917	CB	PHE	A	128	10.578	14.061	38.173	1.00	37.88	C
ATOM	918	CG	PHE	A	128	10.332	15.012	37.028	1.00	37.52	C
ATOM	919	CD1	PHE	A	128	10.088	16.355	37.258	1.00	36.94	C
ATOM	920	CD2	PHE	A	128	10.380	14.559	35.720	1.00	37.02	C
ATOM	921	CE1	PHE	A	128	9.876	17.219	36.203	1.00	37.09	C
ATOM	922	CE2	PHE	A	128	10.170	15.423	34.663	1.00	37.21	C
ATOM	923	CZ	PHE	A	128	9.917	16.748	34.901	1.00	37.15	C
ATOM	924	N	VAL	A	129	7.878	12.646	37.726	1.00	38.00	N
ATOM	925	CA	VAL	A	129	6.716	12.454	36.876	1.00	38.16	C

ATOM	926	C	VAL	A	129	5.442	12.637	37.671	1.00	38.24	C
ATOM	927	O	VAL	A	129	4.494	13.286	37.224	1.00	38.04	O
ATOM	928	CB	VAL	A	129	6.705	11.050	36.268	1.00	38.36	C
ATOM	929	CG1	VAL	A	129	5.398	10.810	35.508	1.00	38.41	C
ATOM	930	CG2	VAL	A	129	7.935	10.841	35.372	1.00	38.22	C
ATOM	931	N	GLU	A	130	5.430	12.038	38.854	1.00	38.42	N
ATOM	932	CA	GLU	A	130	4.289	12.115	39.745	1.00	38.54	C
ATOM	933	C	GLU	A	130	4.025	13.578	40.083	1.00	38.43	C
ATOM	934	O	GLU	A	130	2.898	14.056	39.960	1.00	38.29	O
ATOM	935	CB	GLU	A	130	4.547	11.265	40.997	1.00	38.69	C
ATOM	936	CG	GLU	A	130	4.404	9.763	40.745	1.00	39.15	C
ATOM	937	CD	GLU	A	130	5.160	8.897	41.740	1.00	39.75	C
ATOM	938	OE1	GLU	A	130	5.551	9.403	42.815	1.00	40.08	O
ATOM	939	OE2	GLU	A	130	5.355	7.697	41.441	1.00	40.15	O
ATOM	940	N	LYS	A	131	5.070	14.299	40.471	1.00	38.39	N
ATOM	941	CA	LYS	A	131	4.908	15.707	40.787	1.00	38.52	C
ATOM	942	C	LYS	A	131	4.290	16.431	39.598	1.00	38.61	C
ATOM	943	O	LYS	A	131	3.393	17.252	39.769	1.00	38.51	O
ATOM	944	CB	LYS	A	131	6.240	16.356	41.149	1.00	38.58	C
ATOM	945	CG	LYS	A	131	6.440	16.666	42.625	1.00	38.76	C
ATOM	946	CD	LYS	A	131	7.045	18.060	42.753	1.00	39.73	C
ATOM	947	CE	LYS	A	131	7.756	18.316	44.070	1:00	40.49	C
ATOM	948	NZ	LYS	A	131	8.117	19.772	44.197	1.00	40.68	N
ATOM	949	N	LEU	A	132	4.764	16.136	38.391	1.00	38.84	N
ATOM	950	CA	LEU	A	132	4.196	16.771	37.208	1.00	39.00	C
ATOM	951	C	LEU	A	132	2.726	16.429	37.113	1.00	39.11	C
ATOM	952	O	LEU	A	132	1.903	17.287	36.810	1.00	39.20	O
ATOM	953	CB	LEU	A	132	4.894	16.328	35.932	1.00	38.96	C
ATOM	954	CG	LEU	A	132	6.287	16.899	35.723	1.00	39.44	C
ATOM	955	CD1	LEU	A	132	6.870	16.389	34.429	1.00	39.81	C
ATOM	956	CD2	LEU	A	132	6.261	18.421	35.709	1.00	40.07	C
ATOM	957	N	GLN	A	133	2.396	15.170	37.367	1.00	39.22	N
ATOM	958	CA	GLN	A	133	1.005	14.758	37.335	1.00	39.38	C
ATOM	959	C	GLN	A	133	0.172	15.523	38.370	1.00	39.57	C
ATOM	960	O	GLN	A	133	-0.893	16.034	38.029	1.00	39.48	O
ATOM	961	CB	GLN	A	133	0.874	13.250	37.536	1.00	39.22	C
ATOM	962	N	ASP	A	134	0.656	15.631	39.611	1.00	39.91	N
ATOM	963	CA	ASP	A	134	-0.129	16.279	40.677	1.00	40.29	C
ATOM	964	C	ASP	A	134	-0.437	17.732	40.379	1.00	40.17	C
ATOM	965	O	ASP	A	134	-1.543	18.211	40.623	1.00	40.02	O
ATOM	966	CB	ASP	A	134	0.564	16.198	42.041	1.00	40.57	C
ATOM	967	CG	ASP	A	134	-0.348	16.660	43.182	1.00	41.99	C
ATOM	968	OD1	ASP	A	134	-1.301	17.421	42.910	1.00	43.76	O
ATOM	969	OD2	ASP	A	134	-0.212	16.312	44.378	1.00	44.05	O
ATOM	970	N	ILE	A	135	0.545	18.438	39.846	1.00	40.17	N
ATOM	971	CA	ILE	A	135	0.350	19.836	39.556	1.00	40.10	C
ATOM	972	C	ILE	A	135	-0.719	19.973	38.500	1.00	40.10	C
ATOM	973	O	ILE	A	135	-1.648	20.759	38.652	1.00	40.26	O
ATOM	974	CB	ILE	A	135	1.639	20.455	39.085	1.00	40.10	C
ATOM	975	CG1	ILE	A	135	2.612	20.560	40.261	1.00	40.11	C
ATOM	976	CG2	ILE	A	135	1.358	21.817	38.507	1.00	40.22	C
ATOM	977	CD1	ILE	A	135	4.056	20.688	39.842	1.00	40.17	C
ATOM	978	N	GLN	A	136	-0.596	19.198	37.431	1.00	40.02	N
ATOM	979	CA	GLN	A	136	-1.586	19.248	36.376	1.00	39.96	C
ATOM	980	C	GLN	A	136	-2.956	19.094	37.000	1.00	39.99	C
ATOM	981	O	GLN	A	136	-3.795	19.991	36.921	1.00	39.86	O
ATOM	982	CB	GLN	A	136	-1.350	18.144	35.361	1.00	40.00	C
ATOM	983	N	GLN	A	137	-3.158	17.972	37.679	1.00	40.18	N
ATOM	984	CA	GLN	A	137	-4.486	17.630	38.164	1.00	40.31	C
ATOM	985	C	GLN	A	137	-4.995	18.683	39.114	1.00	40.45	C
ATOM	986	O	GLN	A	137	-6.170	19.046	39.068	1.00	40.75	O

ATOM	987	CB	GLN A 137	-4.502	16.247	38.829	1.00	40.24	C
ATOM	988	N	ARG A 138	-4.116	19.200	39.959	1.00	40.45	N
ATOM	989	CA	ARG A 138	-4.560	20.159	40.956	1.00	40.45	C
ATOM	990	C	ARG A 138	-4.568	21.588	40.419	1.00	40.54	C
ATOM	991	O	ARG A 138	-4.678	22.541	41.188	1.00	40.67	O
ATOM	992	CB	ARG A 138	-3.692	20.069	42.207	1.00	40.43	C
ATOM	993	CG	ARG A 138	-2.399	20.868	42.161	1.00	40.03	C
ATOM	994	CD	ARG A 138	-1.541	20.546	43.346	1.00	39.94	C
ATOM	995	NE	ARG A 138	-0.431	21.458	43.580	1.00	39.71	N
ATOM	996	CZ	ARG A 138	0.842	21.098	43.498	1.00	40.13	C
ATOM	997	NH1	ARG A 138	1.164	19.857	43.150	1.00	40.53	N
ATOM	998	NH2	ARG A 138	1.800	21.978	43.747	1.00	40.33	N
ATOM	999	N	GLY A 139	-4.471	21.742	39.102	1.00	40.47	N
ATOM	1000	CA	GLY A 139	-4.418	23.066	38.508	1.00	40.46	C
ATOM	1001	C	GLY A 139	-3.432	24.021	39.176	1.00	40.45	C
ATOM	1002	O	GLY A 139	-3.616	25.235	39.110	1.00	40.46	O
ATOM	1003	N	GLY A 140	-2.370	23.490	39.780	1.00	40.47	N
ATOM	1004	CA	GLY A 140	-1.425	24.314	40.519	1.00	40.45	C
ATOM	1005	C	GLY A 140	-0.695	25.272	39.602	1.00	40.40	C
ATOM	1006	O	GLY A 140	-0.784	25.116	38.383	1.00	40.79	O
ATOM	1007	N	GLU A 141	-0.015	26.273	40.167	1.00	40.10	N
ATOM	1008	CA	GLU A 141	0.807	27.195	39.371	1.00	40.01	C
ATOM	1009	C	GLU A 141	2.305	26.854	39.458	1.00	39.64	C
ATOM	1010	O	GLU A 141	3.112	27.386	38.692	1.00	39.52	O
ATOM	1011	CB	GLU A 141	0.589	28.660	39.796	1.00	40.20	C
ATOM	1012	CG	GLU A 141	-0.711	29.298	39.315	1.00	41.00	C
ATOM	1013	CD	GLU A 141	-0.845	29.307	37.800	1.00	42.10	C
ATOM	1014	OE1	GLU A 141	0.194	29.181	37.113	1.00	41.99	O
ATOM	1015	OE2	GLU A 141	-1.990	29.437	37.300	1.00	43.15	O
ATOM	1016	N	GLU A 142	2.676	25.977	40.392	1.00	39.25	N
ATOM	1017	CA	GLU A 142	4.075	25.589	40.563	1.00	38.95	C
ATOM	1018	C	GLU A 142	4.613	25.162	39.210	1.00	38.74	C
ATOM	1019	O	GLU A 142	3.859	24.694	38.351	1.00	38.77	O
ATOM	1020	CB	GLU A 142	4.220	24.433	41.577	1.00	38.95	C
ATOM	1021	CG	GLU A 142	5.658	24.138	42.019	1.00	38.90	C
ATOM	1022	CD	GLU A 142	5.797	22.950	42.971	1.00	38.93	C
ATOM	1023	OE1	GLU A 142	4.836	22.164	43.130	1.00	39.58	O
ATOM	1024	OE2	GLU A 142	6.888	22.799	43.565	1.00	38.74	O
ATOM	1025	N	ARG A 143	5.914	25.332	39.020	1.00	38.39	N
ATOM	1026	CA	ARG A 143	6.569	24.908	37.796	1.00	38.25	C
ATOM	1027	C	ARG A 143	7.809	24.122	38.122	1.00	38.14	C
ATOM	1028	O	ARG A 143	8.512	24.450	39.078	1.00	38.46	O
ATOM	1029	CB	ARG A 143	7.046	26.107	37.003	1.00	38.26	C
ATOM	1030	CG	ARG A 143	5.986	26.945	36.398	1.00	37.89	C
ATOM	1031	CD	ARG A 143	6.602	28.026	35.555	1.00	37.35	C
ATOM	1032	NE	ARG A 143	5.610	28.814	34.849	1.00	36.66	N
ATOM	1033	CZ	ARG A 143	5.316	28.668	33.573	1.00	36.40	C
ATOM	1034	NH1	ARG A 143	5.933	27.755	32.831	1.00	36.41	N
ATOM	1035	NH2	ARG A 143	4.397	29.443	33.034	1.00	37.02	N
ATOM	1036	N	LEU A 144	8.116	23.124	37.304	1.00	37.71	N
ATOM	1037	CA	LEU A 144	9.319	22.349	37.517	1.00	37.57	C
ATOM	1038	C	LEU A 144	10.181	22.319	36.294	1.00	37.33	C
ATOM	1039	O	LEU A 144	9.710	22.466	35.165	1.00	37.31	O
ATOM	1040	CB	LEU A 144	8.979	20.909	37.858	1.00	37.69	C
ATOM	1041	CG	LEU A 144	7.981	20.736	38.993	1.00	38.31	C
ATOM	1042	CD1	LEU A 144	7.612	19.255	39.165	1.00	39.02	C
ATOM	1043	CD2	LEU A 144	8.551	21.327	40.263	1.00	37.91	C
ATOM	1044	N	TYR A 145	11.460	22.098	36.528	1.00	37.01	N
ATOM	1045	CA	TYR A 145	12.379	21.922	35.437	1.00	36.87	C
ATOM	1046	C	TYR A 145	13.397	20.886	35.871	1.00	36.85	C
ATOM	1047	O	TYR A 145	-14.146	21.093	36.819	1.00	36.51	O

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ATOM    1048  CB   TYR A 145      13.043  23.255  35.110  1.00 36.92           C
ATOM    1049  CG   TYR A 145      13.505  23.446  33.686  1.00 36.38           C
ATOM    1050  CD1  TYR A 145      13.845  22.383  32.875  1.00 36.31           C
ATOM    1051  CD2  TYR A 145      13.619  24.716  33.163  1.00 36.28           C
ATOM    1052  CE1  TYR A 145      14.278  22.590  31.582  1.00 36.21           C
ATOM    1053  CE2  TYR A 145      14.047  24.923  31.880  1.00 35.94           C
ATOM    1054  CZ   TYR A 145      14.374  23.862  31.093  1.00 35.54           C
ATOM    1055  OH   TYR A 145      14.789  24.081  29.799  1.00 36.13           O
ATOM    1056  N    LEU A 146      13.378  19.736  35.218  1.00 37.06           N
ATOM    1057  CA   LEU A 146      14.396  18.742  35.477  1.00 37.49           C
ATOM    1058  C    LEU A 146      15.628  19.029  34.629  1.00 37.55           C
ATOM    1059  O    LEU A 146      15.532  19.241  33.427  1.00 37.31           O
ATOM    1060  CB   LEU A 146      13.877  17.341  35.173  1.00 37.69           C
ATOM    1061  CG   LEU A 146      14.919  16.233  35.349  1.00 37.95           C
ATOM    1062  CD1  LEU A 146      14.234  14.916  35.567  1.00 37.66           C
ATOM    1063  CD2  LEU A 146      15.849  16.133  34.151  1.00 39.00           C
ATOM    1064  N    GLN A 147      16.786  18.993  35.269  1.00 37.84           N
ATOM    1065  CA   GLN A 147      18.053  19.259  34.617  1.00 38.09           C
ATOM    1066  C    GLN A 147      19.088  18.397  35.306  1.00 37.92           C
ATOM    1067  O    GLN A 147      19.453  18.661  36.443  1.00 37.87           O
ATOM    1068  CB   GLN A 147      18.421  20.725  34.773  1.00 38.37           C
ATOM    1069  CG   GLN A 147      17.331  21.686  34.362  1.00 39.01           C
ATOM    1070  CD   GLN A 147      17.867  23.064  34.191  1.00 39.92           C
ATOM    1071  OE1  GLN A 147      17.149  23.955  33.772  1.00 42.51           O
ATOM    1072  NE2  GLN A 147      19.137  23.253  34.520  1.00 40.24           N
ATOM    1073  N    GLN A 148      19.576  17.385  34.601  1.00 37.81           N
ATOM    1074  CA   GLN A 148      20.433  16.377  35.196  1.00 37.57           C
ATOM    1075  C    GLN A 148      21.325  15.744  34.176  1.00 37.68           C
ATOM    1076  O    GLN A 148      20.876  15.266  33.146  1.00 37.30           O
ATOM    1077  CB   GLN A 148      19.576  15.261  35.773  1.00 37.61           C
ATOM    1078  CG   GLN A 148      20.336  13.971  36.068  1.00 36.79           C
ATOM    1079  CD   GLN A 148      21.398  14.159  37.117  1.00 35.97           C
ATOM    1080  OE1  GLN A 148      21.162  14.814  38.135  1.00 35.11           O
ATOM    1081  NE2  GLN A 148      22.577  13.593  36.875  1.00 35.03           N
ATOM    1082  N    THR A 149      22.596  15.698  34.503  1.00 38.15           N
ATOM    1083  CA   THR A 149      23.574  15.130  33.622  1.00 38.57           C
ATOM    1084  C    THR A 149      23.354  13.647  33.506  1.00 38.68           C
ATOM    1085  O    THR A 149      23.154  12.973  34.509  1.00 39.07           O
ATOM    1086  CB   THR A 149      24.936  15.410  34.214  1.00 38.75           C
ATOM    1087  OG1  THR A 149      25.206  16.807  34.088  1.00 38.86           O
ATOM    1088  CG2  THR A 149      26.036  14.759  33.418  1.00 39.39           C
ATOM    1089  N    LEU A 150      23.393  13.144  32.279  1.00 38.87           N
ATOM    1090  CA   LEU A 150      23.259  11.722  32.021  1.00 39.24           C
ATOM    1091  C    LEU A 150      24.498  10.979  32.507  1.00 39.20           C
ATOM    1092  O    LEU A 150      25.602  11.317  32.101  1.00 39.20           O
ATOM    1093  CB   LEU A 150      23.146  11.465  30.519  1.00 39.46           C
ATOM    1094  CG   LEU A 150      21.938  11.942  29.722  1.00 40.52           C
ATOM    1095  CD1  LEU A 150      22.077  11.563  28.237  1.00 41.06           C
ATOM    1096  CD2  LEU A 150      20.712  11.308  30.303  1.00 41.66           C
ATOM    1097  N    ASN A 151      24.315   9.960  33.343  1.00 39.19           N
ATOM    1098  CA   ASN A 151      25.436   9.171  33.861  1.00 39.46           C
ATOM    1099  C    ASN A 151      25.193   7.642  33.883  1.00 39.43           C
ATOM    1100  O    ASN A 151      24.198   7.162  33.333  1.00 39.15           O
ATOM    1101  CB   ASN A 151      25.731   9.652  35.265  1.00 39.54           C
ATOM    1102  CG   ASN A 151      24.511   9.588  36.150  1.00 40.08           C
ATOM    1103  OD1  ASN A 151      23.874   8.533  36.283  1.00 39.68           O
ATOM    1104  ND2  ASN A 151      24.158  10.725  36.751  1.00 40.83           N
ATOM    1105  N    ASP A 152      26.075   6.892  34.556  1.00 39.43           N
ATOM    1106  CA   ASP A 152      26.025   5.413  34.543  1.00 39.58           C
ATOM    1107  C    ASP A 152      24.761   4.787  35.083  1.00 39.17           C
ATOM    1108  O    ASP A 152      24.477   3.634  34.776  1.00 39.29           O
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ATOM	1109	CB	ASP A 152	27.138	4.756	35.385	1.00	39.92	C
ATOM	1110	CG	ASP A 152	28.489	5.382	35.198	1.00	41.53	C
ATOM	1111	OD1	ASP A 152	28.722	6.005	34.134	1.00	45.10	O
ATOM	1112	OD2	ASP A 152	29.378	5.294	36.076	1.00	42.02	O
ATOM	1113	N	THR A 153	24.008	5.493	35.909	1.00	38.78	N
ATOM	1114	CA	THR A 153	22.881	4.830	36.542	1.00	38.50	C
ATOM	1115	C	THR A 153	21.757	4.573	35.573	1.00	38.26	C
ATOM	1116	O	THR A 153	20.842	3.838	35.882	1.00	38.29	O
ATOM	1117	CB	THR A 153	22.329	5.624	37.733	1.00	38.46	C
ATOM	1118	OG1	THR A 153	21.622	6.780	37.269	1.00	39.25	O
ATOM	1119	CG2	THR A 153	23.445	6.161	38.611	1.00	38.28	C
ATOM	1120	N	VAL A 154	21.804	5.165	34.396	1.00	38.28	N
ATOM	1121	CA	VAL A 154	20.687	4.977	33.491	1.00	38.29	C
ATOM	1122	C	VAL A 154	20.602	3.530	33.067	1.00	38.17	C
ATOM	1123	O	VAL A 154	21.597	2.805	33.092	1.00	38.10	O
ATOM	1124	CB	VAL A 154	20.786	5.838	32.251	1.00	38.15	C
ATOM	1125	CG1	VAL A 154	20.815	7.291	32.649	1.00	38.22	C
ATOM	1126	CG2	VAL A 154	22.007	5.437	31.443	1.00	38.40	C
ATOM	1127	N	GLY A 155	19.395	3.132	32.681	1.00	38.05	N
ATOM	1128	CA	GLY A 155	19.114	1.779	32.258	1.00	38.07	C
ATOM	1129	C	GLY A 155	19.609	1.358	30.894	1.00	38.17	C
ATOM	1130	O	GLY A 155	20.092	2.153	30.081	1.00	38.44	O
ATOM	1131	N	ARG A 156	19.417	0.073	30.642	1.00	38.16	N
ATOM	1132	CA	ARG A 156	19.932	-0.588	29.461	1.00	38.16	C
ATOM	1133	C	ARG A 156	19.414	0.065	28.210	1.00	38.01	C
ATOM	1134	O	ARG A 156	20.185	0.490	27.346	1.00	38.04	O
ATOM	1135	CB	ARG A 156	19.554	-2.080	29.489	1.00	38.18	C
ATOM	1136	N	LYS A 157	18.102	0.178	28.118	1.00	37.83	N
ATOM	1137	CA	LYS A 157	17.545	0.713	26.905	1.00	37.67	C
ATOM	1138	C	LYS A 157	18.144	2.092	26.679	1.00	37.77	C
ATOM	1139	O	LYS A 157	18.579	2.386	25.571	1.00	37.84	O
ATOM	1140	CB	LYS A 157	16.014	0.725	26.936	1.00	37.62	C
ATOM	1141	CG	LYS A 157	15.379	-0.624	26.550	1.00	36.92	C
ATOM	1142	N	ILE A 158	18.247	2.911	27.728	1.00	37.82	N
ATOM	1143	CA	ILE A 158	18.699	4.287	27.526	1.00	37.81	C
ATOM	1144	C	ILE A 158	20.096	4.252	27.008	1.00	37.78	C
ATOM	1145	O	ILE A 158	20.440	4.942	26.058	1.00	37.52	O
ATOM	1146	CB	ILE A 158	18.666	5.109	28.802	1.00	37.90	C
ATOM	1147	CG1	ILE A 158	17.233	5.283	29.280	1.00	37.87	C
ATOM	1148	CG2	ILE A 158	19.281	6.477	28.538	1.00	37.57	C
ATOM	1149	CD1	ILE A 158	16.383	6.034	28.318	1.00	37.95	C
ATOM	1150	N	VAL A 159	20.899	3.418	27.637	1.00	37.89	N
ATOM	1151	CA	VAL A 159	22.263	3.265	27.211	1.00	38.06	C
ATOM	1152	C	VAL A 159	22.255	2.906	25.725	1.00	38.07	C
ATOM	1153	O	VAL A 159	23.025	3.462	24.955	1.00	37.93	O
ATOM	1154	CB	VAL A 159	22.987	2.196	28.039	1.00	38.12	C
ATOM	1155	CG1	VAL A 159	24.208	1.740	27.315	1.00	38.65	C
ATOM	1156	CG2	VAL A 159	23.368	2.734	29.410	1.00	37.65	C
ATOM	1157	N	MET A 160	21.385	1.984	25.318	1.00	38.30	N
ATOM	1158	CA	MET A 160	21.264	1.658	23.894	1.00	38.71	C
ATOM	1159	C	MET A 160	21.024	2.923	23.084	1.00	38.35	C
ATOM	1160	O	MET A 160	21.742	3.219	22.137	1.00	38.42	O
ATOM	1161	CB	MET A 160	20.115	0.682	23.636	1.00	38.93	C
ATOM	1162	CG	MET A 160	20.431	-0.690	24.087	1.00	40.64	C
ATOM	1163	SD	MET A 160	21.840	-1.293	23.180	1.00	44.02	S
ATOM	1164	CE	MET A 160	20.982	-1.709	21.617	1.00	44.00	C
ATOM	1165	N	ASP A 161	19.997	3.665	23.458	1.00	37.94	N
ATOM	1166	CA	ASP A 161	19.702	4.902	22.773	1.00	37.82	C
ATOM	1167	C	ASP A 161	20.955	5.788	22.684	1.00	37.50	C
ATOM	1168	O	ASP A 161	21.395	6.154	21.596	1.00	37.66	O
ATOM	1169	CB	ASP A 161	18.591	5.650	23.511	1.00	37.84	C

ATOM	1170	CG	ASP	A	161	17.274	4.908	23.501	1.00	37.82	C
ATOM	1171	OD1	ASP	A	161	17.082	4.020	22.646	1.00	37.72	O
ATOM	1172	OD2	ASP	A	161	16.366	5.155	24.320	1.00	38.41	O
ATOM	1173	N	PHE	A	162	21.539	6.100	23.836	1.00	36.93	N
ATOM	1174	CA	PHE	A	162	22.672	7.020	23.919	1.00	36.54	C
ATOM	1175	C	PHE	A	162	23.760	6.604	22.960	1.00	36.03	C
ATOM	1176	O	PHE	A	162	24.375	7.446	22.304	1.00	36.06	O
ATOM	1177	CB	PHE	A	162	23.201	7.063	25.364	1.00	36.52	C
ATOM	1178	CG	PHE	A	162	24.386	7.974	25.576	1.00	36.64	C
ATOM	1179	CD1	PHE	A	162	24.209	9.319	25.871	1.00	36.67	C
ATOM	1180	CD2	PHE	A	162	25.682	7.467	25.540	1.00	37.81	C
ATOM	1181	CE1	PHE	A	162	25.299	10.155	26.081	1.00	36.91	C
ATOM	1182	CE2	PHE	A	162	26.787	8.300	25.764	1.00	37.75	C
ATOM	1183	CZ	PHE	A	162	26.592	9.640	26.029	1.00	37.82	C
ATOM	1184	N	LEU	A	163	23.976	5.297	22.878	1.00	35.38	N
ATOM	1185	CA	LEU	A	163	24.998	4.730	22.023	1.00	34.93	C
ATOM	1186	C	LEU	A	163	24.635	4.948	20.591	1.00	34.41	C
ATOM	1187	O	LEU	A	163	25.502	5.067	19.732	1.00	34.36	O
ATOM	1188	CB	LEU	A	163	25.111	3.239	22.272	1.00	35.05	C
ATOM	1189	CG	LEU	A	163	25.977	2.932	23.473	1.00	35.25	C
ATOM	1190	CD1	LEU	A	163	25.944	1.471	23.684	1.00	36.00	C
ATOM	1191	CD2	LEU	A	163	27.404	3.425	23.270	1.00	35.64	C
ATOM	1192	N	GLY	A	164	23.336	4.977	20.338	1.00	33.85	N
ATOM	1193	CA	GLY	A	164	22.832	5.230	19.009	1.00	33.55	C
ATOM	1194	C	GLY	A	164	22.874	6.682	18.548	1.00	33.11	C
ATOM	1195	O	GLY	A	164	22.361	6.977	17.471	1.00	33.36	O
ATOM	1196	N	PHE	A	165	23.443	7.589	19.341	1.00	32.16	N
ATOM	1197	CA	PHE	A	165	23.593	8.964	18.894	1.00	31.85	C
ATOM	1198	C	PHE	A	165	24.628	8.972	17.752	1.00	30.93	C
ATOM	1199	O	PHE	A	165	25.413	8.063	17.650	1.00	30.67	O
ATOM	1200	CB	PHE	A	165	24.028	9.883	20.055	1.00	32.06	C
ATOM	1201	CG	PHE	A	165	22.989	10.052	21.160	1.00	32.55	C
ATOM	1202	CD1	PHE	A	165	21.734	9.478	21.081	1.00	33.69	C
ATOM	1203	CD2	PHE	A	165	23.293	10.786	22.289	1.00	32.64	C
ATOM	1204	CE1	PHE	A	165	20.817	9.646	22.106	1.00	33.39	C
ATOM	1205	CE2	PHE	A	165	22.380	10.948	23.308	1.00	32.11	C
ATOM	1206	CZ	PHE	A	165	21.150	10.380	23.218	1.00	32.69	C
ATOM	1207	N	ASN	A	166	24.600	9.977	16.881	1.00	30.43	N
ATOM	1208	CA	ASN	A	166	25.552	10.106	15.761	1.00	30.00	C
ATOM	1209	C	ASN	A	166	26.932	10.623	16.177	1.00	29.91	C
ATOM	1210	O	ASN	A	166	27.370	11.721	15.812	1.00	28.90	O
ATOM	1211	CB	ASN	A	166	24.957	11.013	14.673	1.00	29.86	C
ATOM	1212	CG	ASN	A	166	25.720	10.957	13.363	1.00	28.91	C
ATOM	1213	OD1	ASN	A	166	26.836	10.423	13.282	1.00	27.68	O
ATOM	1214	ND2	ASN	A	166	25.119	11.528	12.320	1.00	26.76	N
ATOM	1215	N	TRP	A	167	27.604	9.785	16.943	1.00	30.04	N
ATOM	1216	CA	TRP	A	167	28.938	10.044	17.399	1.00	30.41	C
ATOM	1217	C	TRP	A	167	29.823	10.295	16.205	1.00	30.80	C
ATOM	1218	O	TRP	A	167	30.708	11.141	16.237	1.00	30.55	O
ATOM	1219	CB	TRP	A	167	29.390	8.847	18.232	1.00	30.31	C
ATOM	1220	CG	TRP	A	167	28.513	8.746	19.433	1.00	30.59	C
ATOM	1221	CD1	TRP	A	167	27.594	7.792	19.699	1.00	30.51	C
ATOM	1222	CD2	TRP	A	167	28.422	9.696	20.502	1.00	31.94	C
ATOM	1223	NE1	TRP	A	167	26.947	8.067	20.881	1.00	30.98	N
ATOM	1224	CE2	TRP	A	167	27.442	9.232	21.395	1.00	31.41	C
ATOM	1225	CE3	TRP	A	167	29.087	10.885	20.801	1.00	31.71	C
ATOM	1226	CZ2	TRP	A	167	27.112	9.904	22.554	1.00	32.59	C
ATOM	1227	CZ3	TRP	A	167	28.750	11.560	21.944	1.00	32.92	C
ATOM	1228	CH2	TRP	A	167	27.773	11.072	22.811	1.00	33.34	C
ATOM	1229	N	ASN	A	168	29.549	9.596	15.119	1.00	31.69	N
ATOM	1230	CA	ASN	A	168	30.352	9.771	13.936	1.00	32.37	C

ATOM	1231	C	ASN A 168	30.447	11.229	13.590	1.00	32.97	C
ATOM	1232	O	ASN A 168	31.541	11.747	13.390	1.00	33.15	O
ATOM	1233	CB	ASN A 168	29.729	9.064	12.749	1.00	32.68	C
ATOM	1234	CG	ASN A 168	30.594	9.147	11.507	1.00	32.86	C
ATOM	1235	OD1	ASN A 168	31.797	8.914	11.574	1.00	35.02	O
ATOM	1236	ND2	ASN A 168	29.989	9.473	10.368	1.00	31.39	N
ATOM	1237	N	TRP A 169	29.284	11.884	13.518	1.00	33.38	N
ATOM	1238	CA	TRP A 169	29.200	13.279	13.107	1.00	33.28	C
ATOM	1239	C	TRP A 169	29.711	14.237	14.149	1.00	33.33	C
ATOM	1240	O	TRP A 169	30.406	15.188	13.834	1.00	33.43	O
ATOM	1241	CB	TRP A 169	27.756	13.673	12.765	1.00	33.43	C
ATOM	1242	CG	TRP A 169	27.618	15.134	12.412	1.00	33.11	C
ATOM	1243	CD1	TRP A 169	27.814	15.698	11.191	1.00	33.49	C
ATOM	1244	CD2	TRP A 169	27.293	16.205	13.294	1.00	32.94	C
ATOM	1245	NE1	TRP A 169	27.629	17.056	11.251	1.00	33.21	N
ATOM	1246	CE2	TRP A 169	27.306	17.397	12.533	1.00	33.42	C
ATOM	1247	CE3	TRP A 169	26.994	16.284	14.655	1.00	33.15	C
ATOM	1248	CZ2	TRP A 169	27.026	18.648	13.081	1.00	33.66	C
ATOM	1249	CZ3	TRP A 169	26.719	17.526	15.204	1.00	34.02	C
ATOM	1250	CH2	TRP A 169	26.733	18.695	14.413	1.00	34.21	C
ATOM	1251	N	ILE A 170	29.369	14.021	15.398	1.00	33.54	N
ATOM	1252	CA	ILE A 170	29.739	15.024	16.368	1.00	33.92	C
ATOM	1253	C	ILE A 170	31.225	14.935	16.713	1.00	34.07	C
ATOM	1254	O	ILE A 170	31.855	15.939	16.988	1.00	34.23	O
ATOM	1255	CB	ILE A 170	28.832	14.947	17.591	1.00	33.84	C
ATOM	1256	CG1	ILE A 170	28.803	16.288	18.306	1.00	34.22	C
ATOM	1257	CG2	ILE A 170	29.295	13.858	18.499	1.00	34.45	C
ATOM	1258	CD1	ILE A 170	27.869	16.309	19.478	1.00	34.73	N
ATOM	1259	N	ASN A 171	31.801	13.743	16.650	1.00	34.41	C
ATOM	1260	CA	ASN A 171	33.222	13.593	16.950	1.00	34.46	C
ATOM	1261	C	ASN A 171	34.055	14.322	15.918	1.00	34.56	O
ATOM	1262	O	ASN A 171	35.055	14.949	16.260	1.00	34.66	C
ATOM	1263	CB	ASN A 171	33.632	12.116	16.996	1.00	34.47	C
ATOM	1264	CG	ASN A 171	32.969	11.356	18.128	1.00	33.99	N
ATOM	1265	OD1	ASN A 171	32.391	11.951	19.031	1.00	35.35	C
ATOM	1266	ND2	ASN A 171	33.040	10.036	18.077	1.00	32.53	C
ATOM	1267	N	LYS A 172	33.652	14.217	14.654	1.00	34.75	O
ATOM	1268	CA	LYS A 172	34.337	14.917	13.584	1.00	35.18	C
ATOM	1269	C	LYS A 172	34.261	16.415	13.907	1.00	35.29	C
ATOM	1270	O	LYS A 172	35.248	17.133	13.800	1.00	34.89	N
ATOM	1271	CB	LYS A 172	33.711	14.600	12.216	1.00	35.26	N
ATOM	1272	CG	LYS A 172	34.200	13.299	11.587	1.00	36.55	C
ATOM	1273	CD	LYS A 172	33.873	13.158	10.090	1.00	38.20	O
ATOM	1274	CE	LYS A 172	34.512	11.872	9.537	1.00	39.82	C
ATOM	1275	NZ	LYS A 172	34.369	11.661	8.050	1.00	41.20	C
ATOM	1276	N	GLN A 173	33.093	16.875	14.339	1.00	35.70	N
ATOM	1277	CA	GLN A 173	32.931	18.272	14.699	1.00	36.20	C
ATOM	1278	C	GLN A 173	33.929	18.633	15.771	1.00	36.47	C
ATOM	1279	O	GLN A 173	34.605	19.656	15.686	1.00	36.97	O
ATOM	1280	CB	GLN A 173	31.534	18.555	15.231	1.00	36.19	C
ATOM	1281	CG	GLN A 173	30.473	18.637	14.167	1.00	36.97	C
ATOM	1282	CD	GLN A 173	30.765	19.720	13.157	1.00	37.19	C
ATOM	1283	OE1	GLN A 173	31.198	20.808	13.531	1.00	38.68	O
ATOM	1284	NE2	GLN A 173	30.551	19.425	11.879	1.00	35.94	N
ATOM	1285	N	GLN A 174	34.000	17.806	16.802	1.00	36.38	N
ATOM	1286	CA	GLN A 174	34.945	18.041	17.866	1.00	36.42	C
ATOM	1287	C	GLN A 174	36.360	18.102	17.283	1.00	36.56	C
ATOM	1288	O	GLN A 174	37.161	18.945	17.672	1.00	36.42	O
ATOM	1289	CB	GLN A 174	34.815	16.937	18.912	1.00	36.33	C
ATOM	1290	CG	GLN A 174	35.896	16.908	19.963	1.00	36.13	C
ATOM	1291	CD	GLN A 174	35.785	15.676	20.815	1.00	36.16	C

ATOM	1292	OE1	GLN	A	174	35.415	14.613	20.314	1.00	37.84	O
ATOM	1293	NE2	GLN	A	174	36.082	15.803	22.103	1.00	34.98	N
ATOM	1294	N	GLY	A	175	36.649	17.231	16.322	1.00	36.76	N
ATOM	1295	CA	GLY	A	175	37.976	17.158	15.750	1.00	36.97	C
ATOM	1296	C	GLY	A	175	38.302	18.356	14.892	1.00	37.21	C
ATOM	1297	O	GLY	A	175	39.336	18.993	15.070	1.00	37.38	O
ATOM	1298	N	LYS	A	176	37.406	18.682	13.971	1.00	37.44	N
ATOM	1299	CA	LYS	A	176	37.634	19.793	13.064	1.00	37.56	C
ATOM	1300	C	LYS	A	176	37.898	21.090	13.822	1.00	37.47	C
ATOM	1301	O	LYS	A	176	38.713	21.907	13.400	1.00	37.47	O
ATOM	1302	CB	LYS	A	176	36.423	20.014	12.161	1.00	37.71	C
ATOM	1303	CG	LYS	A	176	36.134	18.905	11.163	1.00	38.70	C
ATOM	1304	CD	LYS	A	176	34.960	19.284	10.279	1.00	39.76	C
ATOM	1305	CE	LYS	A	176	34.064	18.092	10.037	1.00	41.48	C
ATOM	1306	NZ	LYS	A	176	32.663	18.481	9.690	1.00	43.43	N
ATOM	1307	N	ARG	A	177	37.212	21.283	14.938	1.00	37.10	N
ATOM	1308	CA	ARG	A	177	37.325	22.544	15.643	1.00	37.08	C
ATOM	1309	C	ARG	A	177	38.352	22.495	16.763	1.00	36.85	C
ATOM	1310	O	ARG	A	177	38.445	23.420	17.564	1.00	36.21	O
ATOM	1311	CB	ARG	A	177	35.980	22.969	16.228	1.00	37.21	C
ATOM	1312	CG	ARG	A	177	34.807	22.773	15.326	1.00	37.50	C
ATOM	1313	CD	ARG	A	177	34.802	23.591	14.053	1.00	38.49	C
ATOM	1314	NE	ARG	A	177	33.750	23.066	13.185	1.00	39.56	N
ATOM	1315	CZ	ARG	A	177	33.884	22.803	11.891	1.00	41.17	C
ATOM	1316	NH1	ARG	A	177	35.026	23.050	11.254	1.00	41.34	N
ATOM	1317	NH2	ARG	A	177	32.855	22.304	11.219	1.00	41.89	N
ATOM	1318	N	GLY	A	178	39.088	21.401	16.859	1.00	36.70	N
ATOM	1319	CA	GLY	A	178	40.131	21.337	17.854	1.00	36.74	C
ATOM	1320	C	GLY	A	178	39.592	21.509	19.249	1.00	36.76	C
ATOM	1321	O	GLY	A	178	40.340	21.817	20.171	1.00	37.18	O
ATOM	1322	N	TRP	A	179	38.293	21.331	19.420	1.00	36.75	N
ATOM	1323	CA	TRP	A	179	37.722	21.439	20.745	1.00	36.66	C
ATOM	1324	C	TRP	A	179	38.309	20.400	21.679	1.00	36.60	C
ATOM	1325	O	TRP	A	179	38.980	19.451	21.260	1.00	35.99	O
ATOM	1326	CB	TRP	A	179	36.222	21.216	20.708	1.00	36.79	C
ATOM	1327	CG	TRP	A	179	35.454	22.258	20.038	1.00	36.51	C
ATOM	1328	CD1	TRP	A	179	35.889	23.470	19.620	1.00	36.67	C
ATOM	1329	CD2	TRP	A	179	34.081	22.180	19.692	1.00	37.40	C
ATOM	1330	NE1	TRP	A	179	34.860	24.168	19.035	1.00	36.91	N
ATOM	1331	CE2	TRP	A	179	33.735	23.390	19.062	1.00	37.43	C
ATOM	1332	CE3	TRP	A	179	33.099	21.198	19.840	1.00	36.64	C
ATOM	1333	CZ2	TRP	A	179	32.456	23.641	18.583	1.00	36.83	C
ATOM	1334	CZ3	TRP	A	179	31.840	21.450	19.365	1.00	36.84	C
ATOM	1335	CH2	TRP	A	179	31.524	22.661	18.744	1.00	36.02	C
ATOM	1336	N	GLY	A	180	38.022	20.595	22.958	1.00	36.66	N
ATOM	1337	CA	GLY	A	180	38.444	19.681	23.992	1.00	36.96	C
ATOM	1338	C	GLY	A	180	37.456	18.548	24.131	1.00	37.25	C
ATOM	1339	O	GLY	A	180	36.698	18.285	23.204	1.00	37.69	O
ATOM	1340	N	GLN	A	181	37.445	17.891	25.288	1.00	37.46	N
ATOM	1341	CA	GLN	A	181	36.581	16.734	25.507	1.00	37.81	C
ATOM	1342	C	GLN	A	181	35.136	17.088	25.802	1.00	37.40	C
ATOM	1343	O	GLN	A	181	34.825	18.177	26.273	1.00	37.59	O
ATOM	1344	CB	GLN	A	181	37.082	15.881	26.680	1.00	38.18	C
ATOM	1345	CG	GLN	A	181	36.684	16.433	28.065	1.00	40.32	C
ATOM	1346	CD	GLN	A	181	36.956	15.470	29.231	1.00	43.44	C
ATOM	1347	OE1	GLN	A	181	38.004	14.802	29.284	1.00	44.84	O
ATOM	1348	NE2	GLN	A	181	36.007	15.406	30.173	1.00	44.80	N
ATOM	1349	N	LEU	A	182	34.266	16.130	25.510	1.00	37.00	N
ATOM	1350	CA	LEU	A	182	32.866	16.181	25.878	1.00	36.47	C
ATOM	1351	C	LEU	A	182	32.856	16.224	27.385	1.00	35.97	C
ATOM	1352	O	LEU	A	182	33.345	15.298	28.009	1.00	35.98	O

ATOM	1353	CB	LEU	A	182	32.208	14.865	25.468	1.00	36.38	C
ATOM	1354	CG	LEU	A	182	30.691	14.707	25.336	1.00	36.76	C
ATOM	1355	CD1	LEU	A	182	30.339	13.254	25.433	1.00	36.70	C
ATOM	1356	CD2	LEU	A	182	29.917	15.417	26.376	1.00	37.66	C
ATOM	1357	N	THR	A	183	32.337	17.270	28.005	1.00	35.50	N
ATOM	1358	CA	THR	A	183	32.310	17.230	29.457	1.00	35.07	C
ATOM	1359	C	THR	A	183	31.008	16.669	29.929	1.00	34.39	C
ATOM	1360	O	THR	A	183	30.944	16.097	31.000	1.00	34.13	O
ATOM	1361	CB	THR	A	183	32.528	18.599	30.105	1.00	35.07	C
ATOM	1362	OG1	THR	A	183	31.402	19.444	29.883	1.00	35.21	O
ATOM	1363	CG2	THR	A	183	33.652	19.310	29.453	1.00	35.76	C
ATOM	1364	N	SER	A	184	29.947	16.848	29.163	1.00	33.83	N
ATOM	1365	CA	SER	A	184	28.710	16.288	29.626	1.00	33.19	C
ATOM	1366	C	SER	A	184	27.563	16.459	28.684	1.00	32.72	C
ATOM	1367	O	SER	A	184	27.643	17.172	27.699	1.00	32.59	O
ATOM	1368	CB	SER	A	184	28.363	16.954	30.949	1.00	33.18	C
ATOM	1369	OG	SER	A	184	28.349	18.347	30.788	1.00	31.82	O
ATOM	1370	N	ASN	A	185	26.484	15.776	29.013	1.00	32.44	N
ATOM	1371	CA	ASN	A	185	25.259	15.893	28.277	1.00	32.59	C
ATOM	1372	C	ASN	A	185	24.218	16.117	29.319	1.00	33.00	C
ATOM	1373	O	ASN	A	185	24.027	15.285	30.184	1.00	32.72	O
ATOM	1374	CB	ASN	A	185	24.917	14.619	27.520	1.00	32.46	C
ATOM	1375	CG	ASN	A	185	25.850	14.351	26.369	1.00	31.69	C
ATOM	1376	OD1	ASN	A	185	26.661	13.436	26.434	1.00	32.60	O
ATOM	1377	ND2	ASN	A	185	25.725	15.121	25.297	1.00	29.86	N
ATOM	1378	N	LEU	A	186	23.549	17.252	29.258	1.00	33.80	N
ATOM	1379	CA	LEU	A	186	22.537	17.536	30.241	1.00	34.36	C
ATOM	1380	C	LEU	A	186	21.199	17.117	29.684	1.00	34.78	C
ATOM	1381	O	LEU	A	186	20.903	17.380	28.512	1.00	35.02	O
ATOM	1382	CB	LEU	A	186	22.500	19.029	30.539	1.00	34.34	C
ATOM	1383	CG	LEU	A	186	21.564	19.433	31.677	1.00	35.25	C
ATOM	1384	CD1	LEU	A	186	22.122	18.827	32.930	1.00	35.58	C
ATOM	1385	CD2	LEU	A	186	21.402	20.956	31.845	1.00	35.43	C
ATOM	1386	N	LEU	A	187	20.393	16.456	30.507	1.00	34.95	N
ATOM	1387	CA	LEU	A	187	19.022	16.189	30.120	1.00	35.27	C
ATOM	1388	C	LEU	A	187	18.117	17.260	30.735	1.00	35.48	C
ATOM	1389	O	LEU	A	187	18.105	17.449	31.951	1.00	35.40	O
ATOM	1390	CB	LEU	A	187	18.593	14.805	30.563	1.00	35.33	C
ATOM	1391	CG	LEU	A	187	17.105	14.481	30.399	1.00	36.09	C
ATOM	1392	CD1	LEU	A	187	16.624	14.525	28.969	1.00	36.40	C
ATOM	1393	CD2	LEU	A	187	16.850	13.114	30.940	1.00	36.96	C
ATOM	1394	N	LEU	A	188	17.380	17.977	29.889	1.00	35.70	N
ATOM	1395	CA	LEU	A	188	16.466	19.005	30.362	1.00	35.89	C
ATOM	1396	C	LEU	A	188	15.047	18.668	29.972	1.00	36.32	O
ATOM	1397	O	LEU	A	188	14.738	18.548	28.792	1.00	36.89	C
ATOM	1398	CB	LEU	A	188	16.795	20.362	29.771	1.00	35.79	C
ATOM	1399	CG	LEU	A	188	18.210	20.889	29.937	1.00	35.66	C
ATOM	1400	CD1	LEU	A	188	18.976	20.745	28.668	1.00	36.04	C
ATOM	1401	CD2	LEU	A	188	18.125	22.328	30.284	1.00	35.23	N
ATOM	1402	N	ILE	A	189	14.184	18.514	30.967	1.00	36.45	C
ATOM	1403	CA	ILE	A	189	12.782	18.254	30.720	1.00	36.25	C
ATOM	1404	C	ILE	A	189	12.105	19.353	31.472	1.00	35.88	O
ATOM	1405	O	ILE	A	189	12.388	19.542	32.651	1.00	35.75	C
ATOM	1406	CB	ILE	A	189	12.368	16.916	31.274	1.00	36.47	C
ATOM	1407	CG1	ILE	A	189	13.126	15.813	30.549	1.00	36.63	C
ATOM	1408	CG2	ILE	A	189	10.865	16.748	31.143	1.00	36.55	C
ATOM	1409	CD1	ILE	A	189	12.884	14.440	31.129	1.00	36.11	N
ATOM	1410	N	GLY	A	190	11.221	20.071	30.789	1.00	35.53	C
ATOM	1411	CA	GLY	A	190	10.614	21.257	31.344	1.00	35.37	C
ATOM	1412	C	GLY	A	190	9.184	21.420	30.921	1.00	35.23	O
ATOM	1413	O	GLY	A	190	8.748	20.857	29.930	1.00	35.26	

ATOM	1414	N	MET A 191	8.458	22.208	31.696	1.00	35.18	N
ATOM	1415	CA	MET A 191	7.063	22.463	31.447	1.00	35.16	C
ATOM	1416	C	MET A 191	6.916	23.584	30.446	1.00	35.00	C
ATOM	1417	O	MET A 191	7.795	24.426	30.316	1.00	35.17	O
ATOM	1418	CB	MET A 191	6.379	22.849	32.750	1.00	35.13	C
ATOM	1419	CG	MET A 191	6.277	21.691	33.710	1.00	35.63	C
ATOM	1420	SD	MET A 191	5.756	22.150	35.360	1.00	35.65	S
ATOM	1421	CE	MET A 191	4.222	22.827	35.017	1.00	36.16	C
ATOM	1422	N	GLU A 192	5.804	23.573	29.727	1.00	34.83	N
ATOM	1423	CA	GLU A 192	5.492	24.626	28.791	1.00	34.74	C
ATOM	1424	C	GLU A 192	5.585	25.955	29.511	1.00	34.72	C
ATOM	1425	O	GLU A 192	5.184	26.067	30.674	1.00	34.67	O
ATOM	1426	CB	GLU A 192	4.085	24.447	28.264	1.00	34.75	C
ATOM	1427	CG	GLU A 192	3.029	24.525	29.348	1.00	35.09	C
ATOM	1428	CD	GLU A 192	1.669	24.117	28.842	1.00	34.97	C
ATOM	1429	OE1	GLU A 192	1.609	23.503	27.756	1.00	33.58	O
ATOM	1430	OE2	GLU A 192	0.672	24.422	29.530	1.00	35.72	O
ATOM	1431	N	GLY A 193	6.121	26.953	28.818	1.00	34.53	N
ATOM	1432	CA	GLY A 193	6.265	28.279	29.378	1.00	34.63	C
ATOM	1433	C	GLY A 193	7.528	28.542	30.180	1.00	34.49	C
ATOM	1434	O	GLY A 193	7.864	29.694	30.434	1.00	34.57	O
ATOM	1435	N	ASN A 194	8.224	27.493	30.594	1.00	34.27	N
ATOM	1436	CA	ASN A 194	9.441	27.672	31.367	1.00	34.06	C
ATOM	1437	C	ASN A 194	10.466	28.492	30.609	1.00	33.93	C
ATOM	1438	O	ASN A 194	10.552	28.415	29.392	1.00	33.84	O
ATOM	1439	CB	ASN A 194	10.051	26.316	31.721	1.00	33.99	C
ATOM	1440	CG	ASN A 194	9.314	25.625	32.836	1.00	33.19	C
ATOM	1441	OD1	ASN A 194	8.257	26.081	33.265	1.00	33.07	O
ATOM	1442	ND2	ASN A 194	9.869	24.528	33.323	1.00	31.93	N
ATOM	1443	N	VAL A 195	11.243	29.285	31.332	1.00	33.86	N
ATOM	1444	CA	VAL A 195	12.288	30.069	30.707	1.00	33.70	C
ATOM	1445	C	VAL A 195	13.621	29.969	31.396	1.00	33.38	C
ATOM	1446	O	VAL A 195	13.721	30.115	32.601	1.00	33.75	O
ATOM	1447	CB	VAL A 195	11.964	31.552	30.779	1.00	33.96	C
ATOM	1448	CG1	VAL A 195	13.151	32.389	30.253	1.00	34.32	C
ATOM	1449	CG2	VAL A 195	10.693	31.854	30.032	1.00	34.15	C
ATOM	1450	N	THR A 196	14.666	29.764	30.621	1.00	33.04	N
ATOM	1451	CA	THR A 196	15.991	29.883	31.161	1.00	32.60	C
ATOM	1452	C	THR A 196	16.438	31.256	30.723	1.00	32.21	C
ATOM	1453	O	THR A 196	16.584	31.500	29.530	1.00	31.64	O
ATOM	1454	CB	THR A 196	16.887	28.836	30.586	1.00	32.68	C
ATOM	1455	OG1	THR A 196	16.466	27.543	31.048	1.00	33.09	O
ATOM	1456	CG2	THR A 196	18.281	29.003	31.124	1.00	32.63	C
ATOM	1457	N	PRO A 197	16.585	32.177	31.672	1.00	31.97	N
ATOM	1458	CA	PRO A 197	17.000	33.530	31.350	1.00	31.74	C
ATOM	1459	C	PRO A 197	18.385	33.564	30.816	1.00	31.92	C
ATOM	1460	O	PRO A 197	19.215	32.717	31.129	1.00	32.52	O
ATOM	1461	CB	PRO A 197	16.950	34.234	32.682	1.00	31.38	C
ATOM	1462	CG	PRO A 197	16.056	33.508	33.418	1.00	31.84	C
ATOM	1463	CD	PRO A 197	16.305	32.055	33.107	1.00	32.08	C
ATOM	1464	N	ALA A 198	18.615	34.592	30.024	1.00	32.06	N
ATOM	1465	CA	ALA A 198	19.846	34.787	29.311	1.00	32.28	C
ATOM	1466	C	ALA A 198	21.101	34.690	30.162	1.00	32.42	C
ATOM	1467	O	ALA A 198	21.213	35.305	31.220	1.00	32.03	O
ATOM	1468	CB	ALA A 198	19.798	36.131	28.625	1.00	32.42	C
ATOM	1469	N	HIS A 199	22.064	33.953	29.630	1.00	32.77	N
ATOM	1470	CA	HIS A 199	23.339	33.737	30.271	1.00	33.31	C
ATOM	1471	C	HIS A 199	24.308	33.252	29.220	1.00	33.76	C
ATOM	1472	O	HIS A 199	23.902	33.013	28.084	1.00	34.10	O
ATOM	1473	CB	HIS A 199	23.194	32.622	31.275	1.00	33.24	C
ATOM	1474	CG	HIS A 199	22.879	31.311	30.639	1.00	32.59	C

ATOM	1475	ND1	HIS	A	199	21.602	30.958	30.269	1.00	31.40	N
ATOM	1476	CD2	HIS	A	199	23.679	30.292	30.253	1.00	32.85	C
ATOM	1477	CE1	HIS	A	199	21.624	29.761	29.714	1.00	32.37	C
ATOM	1478	NE2	HIS	A	199	22.871	29.330	29.698	1.00	32.78	N
ATOM	1479	N	TYR	A	200	25.575	33.093	29.601	1.00	34.35	N
ATOM	1480	CA	TYR	A	200	26.580	32.502	28.712	1.00	34.92	C
ATOM	1481	C	TYR	A	200	27.256	31.350	29.431	1.00	35.15	C
ATOM	1482	O	TYR	A	200	27.285	31.318	30.661	1.00	35.76	O
ATOM	1483	CB	TYR	A	200	27.599	33.510	28.175	1.00	34.90	C
ATOM	1484	CG	TYR	A	200	28.586	34.096	29.156	1.00	34.89	C
ATOM	1485	CD1	TYR	A	200	29.825	33.519	29.359	1.00	33.02	C
ATOM	1486	CD2	TYR	A	200	28.307	35.292	29.802	1.00	36.04	C
ATOM	1487	CE1	TYR	A	200	30.731	34.079	30.224	1.00	33.25	C
ATOM	1488	CE2	TYR	A	200	29.200	35.857	30.664	1.00	35.45	C
ATOM	1489	CZ	TYR	A	200	30.410	35.253	30.882	1.00	34.40	C
ATOM	1490	OH	TYR	A	200	31.301	35.855	31.739	1.00	32.62	O
ATOM	1491	N	ASP	A	201	27.747	30.387	28.654	1.00	35.04	N
ATOM	1492	CA	ASP	A	201	28.386	29.189	29.182	1.00	34.82	C
ATOM	1493	C	ASP	A	201	29.818	29.220	28.652	1.00	34.87	C
ATOM	1494	O	ASP	A	201	30.047	29.734	27.588	1.00	34.81	O
ATOM	1495	CB	ASP	A	201	27.636	27.925	28.727	1.00	34.49	C
ATOM	1496	CG	ASP	A	201	26.212	27.854	29.256	1.00	34.63	C
ATOM	1497	OD1	ASP	A	201	26.046	27.953	30.480	1.00	33.52	O
ATOM	1498	OD2	ASP	A	201	25.191	27.680	28.533	1.00	36.84	O
ATOM	1499	N	GLU	A	202	30.795	28.727	29.399	1.00	35.74	N
ATOM	1500	CA	GLU	A	202	32.176	28.699	28.899	1.00	36.38	C
ATOM	1501	C	GLU	A	202	32.528	27.441	28.126	1.00	36.30	C
ATOM	1502	O	GLU	A	202	33.679	27.019	28.126	1.00	37.04	O
ATOM	1503	CB	GLU	A	202	33.172	28.830	30.048	1.00	36.61	C
ATOM	1504	CG	GLU	A	202	33.100	30.185	30.725	1.00	37.81	C
ATOM	1505	CD	GLU	A	202	33.960	30.276	31.949	1.00	38.93	C
ATOM	1506	OE1	GLU	A	202	33.525	29.783	33.020	1.00	39.85	O
ATOM	1507	OE2	GLU	A	202	35.055	30.858	31.832	1.00	40.19	O
ATOM	1508	N	GLN	A	203	31.556	26.840	27.462	1.00	35.68	N
ATOM	1509	CA	GLN	A	203	31.815	25.643	26.718	1.00	35.24	C
ATOM	1510	C	GLN	A	203	31.107	25.754	25.406	1.00	34.57	C
ATOM	1511	O	GLN	A	203	30.218	26.586	25.256	1.00	34.62	O
ATOM	1512	CB	GLN	A	203	31.317	24.446	27.514	1.00	35.59	C
ATOM	1513	CG	GLN	A	203	32.184	24.236	28.734	1.00	37.42	C
ATOM	1514	CD	GLN	A	203	32.234	22.819	29.233	1.00	38.70	C
ATOM	1515	OE1	GLN	A	203	32.228	21.860	28.458	1.00	39.80	O
ATOM	1516	NE2	GLN	A	203	32.326	22.680	30.541	1.00	41.01	N
ATOM	1517	N	GLN	A	204	31.524	24.939	24.443	1.00	33.68	N
ATOM	1518	CA	GLN	A	204	30.873	24.899	23.165	1.00	32.97	C
ATOM	1519	C	GLN	A	204	29.714	23.959	23.373	1.00	32.67	C
ATOM	1520	O	GLN	A	204	29.838	22.982	24.082	1.00	32.33	O
ATOM	1521	CB	GLN	A	204	31.793	24.352	22.093	1.00	32.85	C
ATOM	1522	CG	GLN	A	204	33.042	25.165	21.819	1.00	32.50	C
ATOM	1523	CD	GLN	A	204	32.786	26.454	21.057	1.00	30.59	C
ATOM	1524	OE1	GLN	A	204	31.656	26.830	20.848	1.00	31.27	O
ATOM	1525	NE2	GLN	A	204	33.843	27.132	20.664	1.00	29.18	N
ATOM	1526	N	ASN	A	205	28.583	24.247	22.755	1.00	32.81	N
ATOM	1527	CA	ASN	A	205	27.393	23.446	22.980	1.00	32.85	C
ATOM	1528	C	ASN	A	205	26.594	23.059	21.733	1.00	32.80	C
ATOM	1529	O	ASN	A	205	26.147	23.921	20.968	1.00	32.72	O
ATOM	1530	CB	ASN	A	205	26.484	24.246	23.919	1.00	32.83	C
ATOM	1531	CG	ASN	A	205	25.178	23.566	24.205	1.00	32.43	C
ATOM	1532	OD1	ASN	A	205	24.914	22.465	23.732	1.00	32.78	O
ATOM	1533	ND2	ASN	A	205	24.339	24.228	24.993	1.00	31.52	N
ATOM	1534	N	PHE	A	206	26.427	21.763	21.515	1.00	32.36	N
ATOM	1535	CA	PHE	A	206	25.454	21.326	20.541	1.00	32.02	C

ATOM	1536	C	PHE A 206	24.167	20.977	21.301	1.00	31.59	C
ATOM	1537	O	PHE A 206	24.144	20.067	22.096	1.00	31.13	O
ATOM	1538	CB	PHE A 206	25.972	20.159	19.754	1.00	32.17	C
ATOM	1539	CG	PHE A 206	26.844	20.554	18.639	1.00	32.42	C
ATOM	1540	CD1	PHE A 206	26.364	21.354	17.630	1.00	33.16	C
ATOM	1541	CD2	PHE A 206	28.149	20.132	18.600	1.00	33.19	C
ATOM	1542	CE1	PHE A 206	27.174	21.721	16.600	1.00	33.34	C
ATOM	1543	CE2	PHE A 206	28.963	20.487	17.580	1.00	32.88	C
ATOM	1544	CZ	PHE A 206	28.485	21.279	16.574	1.00	33.50	C
ATOM	1545	N	PHE A 207	23.104	21.717	21.012	1.00	31.65	N
ATOM	1546	CA	PHE A 207	21.829	21.671	21.726	1.00	31.71	C
ATOM	1547	C	PHE A 207	20.822	20.825	20.924	1.00	31.35	C
ATOM	1548	O	PHE A 207	20.289	21.292	19.930	1.00	30.81	O
ATOM	1549	CB	PHE A 207	21.391	23.148	21.883	1.00	31.56	C
ATOM	1550	CG	PHE A 207	20.118	23.404	22.683	1.00	31.43	C
ATOM	1551	CD1	PHE A 207	18.926	23.676	22.036	1.00	32.30	C
ATOM	1552	CD2	PHE A 207	20.150	23.519	24.058	1.00	31.29	C
ATOM	1553	CE1	PHE A 207	17.781	23.982	22.748	1.00	32.37	C
ATOM	1554	CE2	PHE A 207	19.006	23.832	24.776	1.00	31.14	C
ATOM	1555	CZ	PHE A 207	17.828	24.062	24.122	1.00	32.27	C
ATOM	1556	N	ALA A 208	20.554	19.593	21.368	1.00	31.31	N
ATOM	1557	CA	ALA A 208	19.685	18.672	20.611	1.00	31.33	C
ATOM	1558	C	ALA A 208	18.264	18.543	21.138	1.00	31.59	C
ATOM	1559	O	ALA A 208	18.016	17.860	22.133	1.00	31.13	O
ATOM	1560	CB	ALA A 208	20.293	17.334	20.537	1.00	30.98	C
ATOM	1561	N	GLN A 209	17.340	19.169	20.409	1.00	32.00	N
ATOM	1562	CA	GLN A 209	15.935	19.183	20.751	1.00	32.37	C
ATOM	1563	C	GLN A 209	15.288	17.867	20.358	1.00	32.76	C
ATOM	1564	O	GLN A 209	15.492	17.360	19.247	1.00	32.19	O
ATOM	1565	CB	GLN A 209	15.245	20.332	20.031	1.00	32.55	C
ATOM	1566	CG	GLN A 209	13.802	20.589	20.470	1.00	32.44	C
ATOM	1567	CD	GLN A 209	13.689	20.978	21.925	1.00	32.27	C
ATOM	1568	OE1	GLN A 209	14.699	21.254	22.587	1.00	31.73	O
ATOM	1569	NE2	GLN A 209	12.457	21.000	22.436	1.00	32.63	N
ATOM	1570	N	ILE A 210	14.467	17.360	21.272	1.00	33.20	N
ATOM	1571	CA	ILE A 210	13.907	16.030	21.165	1.00	33.55	C
ATOM	1572	C	ILE A 210	12.399	15.998	21.195	1.00	33.37	C
ATOM	1573	O	ILE A 210	11.788	15.337	20.369	1.00	33.25	O
ATOM	1574	CB	ILE A 210	14.456	15.210	22.302	1.00	33.79	C
ATOM	1575	CG1	ILE A 210	15.900	14.837	21.980	1.00	34.71	C
ATOM	1576	CG2	ILE A 210	13.604	13.982	22.528	1.00	33.99	C
ATOM	1577	CD1	ILE A 210	16.679	14.375	23.191	1.00	35.48	C
ATOM	1578	N	LYS A 211	11.804	16.688	22.156	1.00	33.27	N
ATOM	1579	CA	LYS A 211	10.365	16.739	22.263	1.00	33.48	C
ATOM	1580	C	LYS A 211	9.960	18.146	22.559	1.00	33.68	C
ATOM	1581	O	LYS A 211	10.545	18.789	23.407	1.00	34.10	O
ATOM	1582	CB	LYS A 211	9.867	15.875	23.405	1.00	33.57	C
ATOM	1583	CG	LYS A 211	8.355	15.708	23.409	1.00	34.06	C
ATOM	1584	CD	LYS A 211	7.840	15.250	24.752	1.00	34.79	C
ATOM	1585	CE	LYS A 211	6.635	14.324	24.635	1.00	35.65	C
ATOM	1586	NZ	LYS A 211	5.876	14.398	23.369	1.00	36.67	N
ATOM	1587	N	GLY A 212	8.938	18.626	21.876	1.00	34.06	N
ATOM	1588	CA	GLY A 212	8.460	19.969	22.103	1.00	34.09	C
ATOM	1589	C	GLY A 212	9.270	20.966	21.314	1.00	34.27	C
ATOM	1590	O	GLY A 212	10.156	20.599	20.532	1.00	34.27	O
ATOM	1591	N	TYR A 213	8.955	22.237	21.523	1.00	34.23	N
ATOM	1592	CA	TYR A 213	9.640	23.311	20.843	1.00	34.12	C
ATOM	1593	C	TYR A 213	10.216	24.318	21.824	1.00	33.81	C
ATOM	1594	O	TYR A 213	9.602	24.652	22.835	1.00	33.09	O
ATOM	1595	CB	TYR A 213	8.665	23.994	19.899	1.00	34.42	C
ATOM	1596	CG	TYR A 213	8.257	23.091	18.789	1.00	35.40	C

ATOM	1597	CD1	TYR	A	213	7.228	22.163	18.955	1.00	36.80	C
ATOM	1598	CD2	TYR	A	213	8.929	23.122	17.586	1.00	36.00	C
ATOM	1599	CE1	TYR	A	213	6.873	21.323	17.944	1.00	36.82	C
ATOM	1600	CE2	TYR	A	213	8.579	22.292	16.567	1.00	37.06	C
ATOM	1601	CZ	TYR	A	213	7.560	21.390	16.743	1.00	37.82	C
ATOM	1602	OH	TYR	A	213	7.242	20.568	15.688	1.00	40.76	O
ATOM	1603	N	LYS	A	214	11.410	24.804	21.517	1.00	33.91	N
ATOM	1604	CA	LYS	A	214	12.046	25.809	22.359	1.00	33.87	C
ATOM	1605	C	LYS	A	214	12.479	27.033	21.551	1.00	33.71	C
ATOM	1606	O	LYS	A	214	13.173	26.918	20.538	1.00	33.58	O
ATOM	1607	CB	LYS	A	214	13.237	25.208	23.101	1.00	33.64	C
ATOM	1608	CG	LYS	A	214	12.881	24.443	24.364	1.00	33.56	C
ATOM	1609	CD	LYS	A	214	14.126	23.861	24.973	1.00	33.29	C
ATOM	1610	CE	LYS	A	214	14.001	23.615	26.458	1.00	33.54	C
ATOM	1611	NZ	LYS	A	214	15.346	23.419	27.130	1.00	32.27	N
ATOM	1612	N	ARG	A	215	12.043	28.205	21.986	1.00	33.56	N
ATOM	1613	CA	ARG	A	215	12.479	29.427	21.339	1.00	33.91	C
ATOM	1614	C	ARG	A	215	13.816	29.800	21.944	1.00	33.54	C
ATOM	1615	O	ARG	A	215	13.946	29.923	23.146	1.00	32.78	O
ATOM	1616	CB	ARG	A	215	11.482	30.552	21.558	1.00	34.15	C
ATOM	1617	CG	ARG	A	215	11.865	31.844	20.885	1.00	34.51	C
ATOM	1618	CD	ARG	A	215	11.287	33.028	21.593	1.00	34.99	C
ATOM	1619	NE	ARG	A	215	11.381	34.255	20.823	1.00	35.43	N
ATOM	1620	CZ	ARG	A	215	10.688	35.346	21.103	1.00	35.27	C
ATOM	1621	NH1	ARG	A	215	9.860	35.371	22.144	1.00	34.68	N
ATOM	1622	NH2	ARG	A	215	10.829	36.415	20.344	1.00	35.16	N
ATOM	1623	N	CYS	A	216	14.810	29.962	21.092	1.00	33.76	N
ATOM	1624	CA	CYS	A	216	16.152	30.238	21.542	1.00	33.91	C
ATOM	1625	C	CYS	A	216	16.555	31.613	21.068	1.00	34.31	C
ATOM	1626	O	CYS	A	216	16.534	31.885	19.872	1.00	34.69	O
ATOM	1627	CB	CYS	A	216	17.099	29.189	20.968	1.00	33.84	C
ATOM	1628	SG	CYS	A	216	16.655	27.490	21.397	1.00	32.85	S
ATOM	1629	N	ILE	A	217	16.886	32.494	22.004	1.00	34.57	N
ATOM	1630	CA	ILE	A	217	17.335	33.830	21.648	1.00	34.82	C
ATOM	1631	C	ILE	A	217	18.785	33.999	22.046	1.00	34.50	C
ATOM	1632	O	ILE	A	217	19.136	33.839	23.213	1.00	34.30	O
ATOM	1633	CB	ILE	A	217	16.475	34.890	22.324	1.00	35.07	C
ATOM	1634	CG1	ILE	A	217	15.003	34.652	22.001	1.00	35.20	C
ATOM	1635	CG2	ILE	A	217	16.881	36.259	21.844	1.00	35.38	C
ATOM	1636	CD1	ILE	A	217	14.086	35.585	22.722	1.00	36.16	C
ATOM	1637	N	LEU	A	218	19.620	34.315	21.060	1.00	34.32	N
ATOM	1638	CA	LEU	A	218	21.052	34.443	21.277	1.00	34.44	C
ATOM	1639	C	LEU	A	218	21.565	35.844	21.017	1.00	34.27	C
ATOM	1640	O	LEU	A	218	21.074	36.561	20.148	1.00	34.59	O
ATOM	1641	CB	LEU	A	218	21.818	33.476	20.365	1.00	34.57	C
ATOM	1642	CG	LEU	A	218	21.953	32.036	20.844	1.00	34.62	C
ATOM	1643	CD1	LEU	A	218	20.614	31.435	21.124	1.00	34.96	C
ATOM	1644	CD2	LEU	A	218	22.638	31.235	19.789	1.00	35.31	C
ATOM	1645	N	PHE	A	219	22.594	36.200	21.768	1.00	33.79	N
ATOM	1646	CA	PHE	A	219	23.258	37.462	21.632	1.00	33.40	C
ATOM	1647	C	PHE	A	219	24.730	37.155	21.617	1.00	33.29	C
ATOM	1648	O	PHE	A	219	25.222	36.434	22.463	1.00	33.45	O
ATOM	1649	CB	PHE	A	219	22.964	38.330	22.832	1.00	33.37	C
ATOM	1650	CG	PHE	A	219	21.509	38.586	23.051	1.00	33.91	C
ATOM	1651	CD1	PHE	A	219	20.852	39.607	22.379	1.00	33.73	C
ATOM	1652	CD2	PHE	A	219	20.794	37.812	23.942	1.00	33.70	C
ATOM	1653	CE1	PHE	A	219	19.512	39.832	22.600	1.00	33.52	C
ATOM	1654	CE2	PHE	A	219	19.460	38.038	24.156	1.00	33.47	C
ATOM	1655	CZ	PHE	A	219	18.818	39.045	23.486	1.00	33.23	C
ATOM	1656	N	PRO	A	220	25.438	37.683	20.642	1.00	33.46	N
ATOM	1657	CA	PRO	A	220	26.888	37.496	20.536	1.00	33.50	C

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ATOM   1658  C    PRO A 220     27.675  38.131  21.699  1.00 33.51           C
ATOM   1659  O    PRO A 220     27.185  39.049  22.363  1.00 33.18           O
ATOM   1660  CB   PRO A 220     27.246  38.169  19.211  1.00 33.51           C
ATOM   1661  CG   PRO A 220     25.977  38.683  18.629  1.00 33.41           C
ATOM   1662  CD   PRO A 220     24.869  38.462  19.544  1.00 33.33           C
ATOM   1663  N    PRO A 221     28.886  37.627  21.942  1.00 33.38           N
ATOM   1664  CA   PRO A 221     29.731  38.102  23.044  1.00 33.30           C
ATOM   1665  C    PRO A 221     29.966  39.581  23.081  1.00 33.55           C
ATOM   1666  O    PRO A 221     30.043  40.151  24.147  1.00 33.66           O
ATOM   1667  CB   PRO A 221     31.033  37.375  22.799  1.00 33.11           C
ATOM   1668  CG   PRO A 221     30.589  36.128  22.147  1.00 33.06           C
ATOM   1669  CD   PRO A 221     29.523  36.522  21.207  1.00 32.91           C
ATOM   1670  N    ASP A 222     30.009  40.217  21.933  1.00 34.30           N
ATOM   1671  CA   ASP A 222     30.277  41.628  21.904  1.00 34.71           C
ATOM   1672  C    ASP A 222     29.073  42.419  22.382  1.00 34.56           C
ATOM   1673  O    ASP A 222     29.048  43.634  22.241  1.00 34.68           O
ATOM   1674  CB   ASP A 222     30.679  42.055  20.502  1.00 34.79           C
ATOM   1675  CG   ASP A 222     29.508  42.228  19.608  1.00 36.26           C
ATOM   1676  OD1  ASP A 222     28.387  41.897  20.028  1.00 38.21           O
ATOM   1677  OD2  ASP A 222     29.601  42.692  18.462  1.00 40.87           O
ATOM   1678  N    GLN A 223     28.062  41.760  22.930  1.00 34.48           N
ATOM   1679  CA   GLN A 223     26.965  42.532  23.497  1.00 34.78           C
ATOM   1680  C    GLN A 223     27.031  42.541  25.011  1.00 34.33           C
ATOM   1681  O    GLN A 223     26.077  42.878  25.686  1.00 34.70           O
ATOM   1682  CB   GLN A 223     25.595  42.133  22.940  1.00 34.87           C
ATOM   1683  CG   GLN A 223     25.364  42.825  21.599  1.00 36.55           C
ATOM   1684  CD   GLN A 223     23.990  42.635  21.020  1.00 39.56           C
ATOM   1685  OE1  GLN A 223     22.986  42.824  21.701  1.00 42.40           O
ATOM   1686  NE2  GLN A 223     23.936  42.294  19.742  1.00 41.89           N
ATOM   1687  N    PHE A 224     28.198  42.219  25.534  1.00 34.13           N
ATOM   1688  CA   PHE A 224     28.437  42.270  26.965  1.00 34.17           C
ATOM   1689  C    PHE A 224     27.941  43.571  27.570  1.00 34.88           C
ATOM   1690  O    PHE A 224     27.310  43.549  28.622  1.00 35.50           O
ATOM   1691  CB   PHE A 224     29.932  42.159  27.224  1.00 33.66           C
ATOM   1692  CG   PHE A 224     30.305  42.027  28.661  1.00 32.69           C
ATOM   1693  CD1  PHE A 224     30.429  43.137  29.476  1.00 33.11           C
ATOM   1694  CD2  PHE A 224     30.609  40.790  29.191  1.00 31.85           C
ATOM   1695  CE1  PHE A 224     30.821  43.003  30.817  1.00 31.76           C
ATOM   1696  CE2  PHE A 224     30.993  40.661  30.498  1.00 31.29           C
ATOM   1697  CZ   PHE A 224     31.098  41.775  31.316  1.00 30.73           C
ATOM   1698  N    GLU A 225     28.235  44.706  26.930  1.00 35.46           N
ATOM   1699  CA   GLU A 225     27.852  45.994  27.492  1.00 35.85           C
ATOM   1700  C    GLU A 225     26.362  46.133  27.608  1.00 35.42           C
ATOM   1701  O    GLU A 225     25.873  46.955  28.386  1.00 35.16           O
ATOM   1702  CB   GLU A 225     28.401  47.175  26.688  1.00 36.59           C
ATOM   1703  CG   GLU A 225     29.892  47.377  26.917  1.00 39.78           C
ATOM   1704  CD   GLU A 225     30.357  48.822  27.125  1.00 43.65           C
ATOM   1705  OE1  GLU A 225     29.937  49.524  28.099  1.00 44.64           O
ATOM   1706  OE2  GLU A 225     31.224  49.234  26.319  1.00 47.74           O
ATOM   1707  N    CYS A 226     25.633  45.329  26.851  1.00 35.07           N
ATOM   1708  CA   CYS A 226     24.192  45.453  26.842  1.00 34.93           C
ATOM   1709  C    CYS A 226     23.473  44.498  27.770  1.00 34.91           C
ATOM   1710  O    CYS A 226     22.266  44.654  28.019  1.00 34.86           O
ATOM   1711  CB   CYS A 226     23.681  45.196  25.448  1.00 34.80           C
ATOM   1712  SG   CYS A 226     24.135  46.461  24.291  1.00 34.76           S
ATOM   1713  N    LEU A 227     24.191  43.521  28.296  1.00 34.47           N
ATOM   1714  CA   LEU A 227     23.509  42.483  29.025  1.00 34.57           C
ATOM   1715  C    LEU A 227     23.815  42.408  30.503  1.00 34.08           C
ATOM   1716  O    LEU A 227     23.122  41.725  31.235  1.00 33.57           O
ATOM   1717  CB   LEU A 227     23.739  41.162  28.313  1.00 34.97           C
ATOM   1718  CG   LEU A 227     22.883  41.127  27.047  1.00 36.04           C
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ATOM	1719	CD1	LEU A 227	23.454	40.177	26.043	1.00	37.99	C
ATOM	1720	CD2	LEU A 227	21.474	40.719	27.394	1.00	36.66	C
ATOM	1721	N	TYR A 228	24.866	43.104	30.917	1.00	34.23	N
ATOM	1722	CA	TYR A 228	25.172	43.334	32.329	1.00	34.02	C
ATOM	1723	C	TYR A 228	25.163	42.091	33.196	1.00	33.81	C
ATOM	1724	O	TYR A 228	24.294	41.900	34.041	1.00	33.87	O
ATOM	1725	CB	TYR A 228	24.183	44.345	32.897	1.00	33.73	C
ATOM	1726	CG	TYR A 228	24.153	45.658	32.166	1.00	33.50	C
ATOM	1727	CD1	TYR A 228	24.947	46.712	32.568	1.00	33.63	C
ATOM	1728	CD2	TYR A 228	23.312	45.853	31.086	1.00	35.03	C
ATOM	1729	CE1	TYR A 228	24.903	47.932	31.924	1.00	34.25	C
ATOM	1730	CE2	TYR A 228	23.268	47.066	30.419	1.00	35.62	C
ATOM	1731	CZ	TYR A 228	24.068	48.106	30.848	1.00	35.60	C
ATOM	1732	OH	TYR A 228	24.027	49.324	30.203	1.00	36.79	O
ATOM	1733	N	PRO A 229	26.170	41.263	33.027	1.00	33.75	N
ATOM	1734	CA	PRO A 229	26.255	40.032	33.791	1.00	33.73	C
ATOM	1735	C	PRO A 229	26.538	40.313	35.231	1.00	33.32	C
ATOM	1736	O	PRO A 229	27.228	41.263	35.530	1.00	33.73	O
ATOM	1737	CB	PRO A 229	27.449	39.319	33.169	1.00	33.87	C
ATOM	1738	CG	PRO A 229	28.264	40.366	32.543	1.00	33.66	C
ATOM	1739	CD	PRO A 229	27.334	41.457	32.156	1.00	34.15	C
ATOM	1740	N	TYR A 230	25.992	39.509	36.122	1.00	32.95	N
ATOM	1741	CA	TYR A 230	26.330	39.654	37.510	1.00	32.64	C
ATOM	1742	C	TYR A 230	27.836	39.534	37.651	1.00	32.59	C
ATOM	1743	O	TYR A 230	28.536	39.020	36.793	1.00	32.76	O
ATOM	1744	CB	TYR A 230	25.713	38.547	38.351	1.00	32.25	C
ATOM	1745	CG	TYR A 230	24.237	38.640	38.573	1.00	31.53	C
ATOM	1746	CD1	TYR A 230	23.346	38.125	37.641	1.00	31.07	C
ATOM	1747	CD2	TYR A 230	23.727	39.192	39.748	1.00	29.93	C
ATOM	1748	CE1	TYR A 230	21.996	38.185	37.859	1.00	31.19	C
ATOM	1749	CE2	TYR A 230	22.395	39.253	39.980	1.00	28.83	C
ATOM	1750	CZ	TYR A 230	21.523	38.755	39.040	1.00	31.04	C
ATOM	1751	OH	TYR A 230	20.165	38.816	39.272	1.00	32.40	O
ATOM	1752	N	PRO A 231	28.328	40.016	38.764	1.00	32.69	N
ATOM	1753	CA	PRO A 231	29.725	39.852	39.124	1.00	32.75	C
ATOM	1754	C	PRO A 231	30.159	38.384	39.159	1.00	32.72	C
ATOM	1755	O	PRO A 231	29.434	37.497	39.604	1.00	32.86	O
ATOM	1756	CB	PRO A 231	29.768	40.423	40.533	1.00	32.82	C
ATOM	1757	CG	PRO A 231	28.625	41.349	40.605	1.00	32.96	C
ATOM	1758	CD	PRO A 231	27.576	40.802	39.751	1.00	32.88	C
ATOM	1759	N	VAL A 232	31.387	38.151	38.740	1.00	32.40	N
ATOM	1760	CA	VAL A 232	31.938	36.825	38.680	1.00	32.10	C
ATOM	1761	C	VAL A 232	31.776	36.022	39.963	1.00	32.41	C
ATOM	1762	O	VAL A 232	31.546	34.826	39.906	1.00	32.96	O
ATOM	1763	CB	VAL A 232	33.422	36.918	38.332	1.00	32.04	C
ATOM	1764	CG1	VAL A 232	34.131	35.666	38.721	1.00	31.82	C
ATOM	1765	CG2	VAL A 232	33.601	37.221	36.851	1.00	31.85	C
ATOM	1766	N	HIS A 233	31.918	36.650	41.124	1.00	32.61	N
ATOM	1767	CA	HIS A 233	31.819	35.910	42.376	1.00	32.41	C
ATOM	1768	C	HIS A 233	30.383	35.727	42.874	1.00	32.27	C
ATOM	1769	O	HIS A 233	30.134	35.052	43.860	1.00	32.05	O
ATOM	1770	CB	HIS A 233	32.667	36.577	43.458	1.00	32.52	C
ATOM	1771	CG	HIS A 233	34.135	36.579	43.164	1.00	33.14	C
ATOM	1772	ND1	HIS A 233	34.787	37.672	42.631	1.00	34.57	N
ATOM	1773	CD2	HIS A 233	35.083	35.629	43.342	1.00	34.15	C
ATOM	1774	CE1	HIS A 233	36.071	37.398	42.497	1.00	34.40	C
ATOM	1775	NE2	HIS A 233	36.278	36.164	42.922	1.00	35.34	N
ATOM	1776	N	HIS A 234	29.423	36.314	42.194	1.00	32.53	N
ATOM	1777	CA	HIS A 234	28.038	36.145	42.604	1.00	33.01	C
ATOM	1778	C	HIS A 234	27.503	34.834	42.094	1.00	33.09	C
ATOM	1779	O	HIS A 234	27.932	34.325	41.068	1.00	33.26	O

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ATOM   1780  CB  HIS A 234    27.221  37.276  42.024  1.00 33.15      C
ATOM   1781  CG  HIS A 234    25.817  37.383  42.531  1.00 32.96      C
ATOM   1782  ND1 HIS A 234    24.767  36.704  41.951  1.00 32.53      N
ATOM   1783  CD2 HIS A 234    25.268  38.191  43.471  1.00 32.12      C
ATOM   1784  CE1 HIS A 234    23.639  37.056  42.540  1.00 32.45      C
ATOM   1785  NE2 HIS A 234    23.916  37.953  43.470  1.00 32.09      N
ATOM   1786  N   PRO A 235    26.571  34.263  42.827  1.00 33.15      N
ATOM   1787  CA  PRO A 235    25.985  32.996  42.410  1.00 32.79      C
ATOM   1788  C   PRO A 235    25.386  33.045  41.026  1.00 32.62      C
ATOM   1789  O   PRO A 235    25.210  31.990  40.440  1.00 32.65      O
ATOM   1790  CB  PRO A 235    24.897  32.773  43.450  1.00 33.00      C
ATOM   1791  CG  PRO A 235    25.412  33.500  44.672  1.00 32.79      C
ATOM   1792  CD  PRO A 235    26.049  34.725  44.128  1.00 33.00      C
ATOM   1793  N   CYS A 236    25.095  34.226  40.493  1.00 32.39      N
ATOM   1794  CA  CYS A 236    24.487  34.286  39.185  1.00 32.11      C
ATOM   1795  C   CYS A 236    25.529  34.640  38.139  1.00 32.34      C
ATOM   1796  O   CYS A 236    25.217  35.034  37.018  1.00 32.23      O
ATOM   1797  CB  CYS A 236    23.270  35.192  39.206  1.00 32.02      C
ATOM   1798  SG  CYS A 236    21.990  34.545  40.326  1.00 32.09      S
ATOM   1799  N   ASP A 237    26.789  34.456  38.511  1.00 32.71      N
ATOM   1800  CA  ASP A 237    27.883  34.609  37.576  1.00 33.21      C
ATOM   1801  C   ASP A 237    27.518  34.022  36.211  1.00 33.63      C
ATOM   1802  O   ASP A 237    27.042  32.911  36.095  1.00 33.33      O
ATOM   1803  CB  ASP A 237    29.139  33.964  38.132  1.00 33.01      C
ATOM   1804  CG  ASP A 237    30.283  33.981  37.151  1.00 33.76      C
ATOM   1805  OD1 ASP A 237    30.340  34.874  36.279  1.00 34.52      O
ATOM   1806  OD2 ASP A 237    31.193  33.135  37.181  1.00 36.09      O
ATOM   1807  N   ARG A 238    27.731  34.821  35.180  1.00 34.68      N
ATOM   1808  CA  ARG A 238    27.414  34.451  33.810  1.00 35.15      C
ATOM   1809  C   ARG A 238    25.962  34.690  33.375  1.00 34.98      C
ATOM   1810  O   ARG A 238    25.664  34.543  32.197  1.00 34.26      O
ATOM   1811  CB  ARG A 238    27.819  33.020  33.561  1.00 35.64      C
ATOM   1812  CG  ARG A 238    29.286  32.847  33.620  1.00 36.86      C
ATOM   1813  CD  ARG A 238    29.682  31.474  33.268  1.00 38.59      C
ATOM   1814  NE  ARG A 238    29.321  30.549  34.338  1.00 41.64      N
ATOM   1815  CZ  ARG A 238    28.265  29.755  34.286  1.00 43.17      C
ATOM   1816  NH1 ARG A 238    27.459  29.802  33.218  1.00 44.38      N
ATOM   1817  NH2 ARG A 238    28.006  28.923  35.291  1.00 42.18      N
ATOM   1818  N   GLN A 239    25.067  35.044  34.303  1.00 35.13      N
ATOM   1819  CA  GLN A 239    23.683  35.360  33.920  1.00 35.13      C
ATOM   1820  C   GLN A 239    23.558  36.872  33.825  1.00 34.56      C
ATOM   1821  O   GLN A 239    24.240  37.587  34.539  1.00 34.65      O
ATOM   1822  CB  GLN A 239    22.646  34.839  34.921  1.00 35.27      C
ATOM   1823  CG  GLN A 239    22.952  33.510  35.566  1.00 37.30      C
ATOM   1824  CD  GLN A 239    23.270  32.431  34.552  1.00 41.59      C
ATOM   1825  OE1 GLN A 239    22.418  32.072  33.726  1.00 45.42      O
ATOM   1826  NE2 GLN A 239    24.491  31.899  34.609  1.00 42.92      N
ATOM   1827  N   SER A 240    22.705  37.358  32.930  1.00 33.99      N
ATOM   1828  CA  SER A 240    22.455  38.785  32.802  1.00 33.14      C
ATOM   1829  C   SER A 240    21.613  39.254  33.957  1.00 32.53      C
ATOM   1830  O   SER A 240    20.773  38.528  34.446  1.00 31.77      O
ATOM   1831  CB  SER A 240    21.663  39.077  31.542  1.00 33.15      C
ATOM   1832  OG  SER A 240    20.971  40.309  31.668  1.00 33.28      O
ATOM   1833  N   GLN A 241    21.805  40.492  34.371  1.00 32.52      N
ATOM   1834  CA  GLN A 241    21.022  41.025  35.476  1.00 32.54      C
ATOM   1835  C   GLN A 241    19.711  41.629  35.001  1.00 32.44      C
ATOM   1836  O   GLN A 241    18.872  42.019  35.804  1.00 32.16      O
ATOM   1837  CB  GLN A 241    21.791  42.116  36.196  1.00 32.36      C
ATOM   1838  CG  GLN A 241    22.995  41.669  36.917  1.00 32.74      C
ATOM   1839  CD  GLN A 241    23.760  42.837  37.450  1.00 33.65      C
ATOM   1840  OE1 GLN A 241    23.353  43.442  38.428  1.00 34.26      O
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ATOM	1841	NE2	GLN	A	241	24.858	43.182	36.794	1.00	35.62	N
ATOM	1842	N	VAL	A	242	19.513	41.708	33.705	1.00	32.07	N
ATOM	1843	CA	VAL	A	242	18.357	42.412	33.255	1.00	32.29	C
ATOM	1844	C	VAL	A	242	17.162	41.521	33.265	1.00	31.93	C
ATOM	1845	O	VAL	A	242	17.221	40.442	32.734	1.00	32.93	O
ATOM	1846	CB	VAL	A	242	18.516	42.848	31.808	1.00	32.63	C
ATOM	1847	CG1	VAL	A	242	17.252	43.532	31.320	1.00	32.50	C
ATOM	1848	CG2	VAL	A	242	19.717	43.714	31.655	1.00	33.06	C
ATOM	1849	N	ASP	A	243	16.067	41.977	33.838	1.00	31.76	N
ATOM	1850	CA	ASP	A	243	14.812	41.271	33.714	1.00	31.73	C
ATOM	1851	C	ASP	A	243	14.177	41.559	32.346	1.00	31.87	C
ATOM	1852	O	ASP	A	243	13.536	42.595	32.150	1.00	31.46	O
ATOM	1853	CB	ASP	A	243	13.861	41.689	34.830	1.00	31.61	C
ATOM	1854	CG	ASP	A	243	12.488	41.049	34.708	1.00	32.08	C
ATOM	1855	OD1	ASP	A	243	12.164	40.448	33.655	1.00	30.69	O
ATOM	1856	OD2	ASP	A	243	11.654	41.103	35.635	1.00	33.90	O
ATOM	1857	N	PHE	A	244	14.326	40.623	31.410	1.00	32.16	N
ATOM	1858	CA	PHE	A	244	13.746	40.787	30.075	1.00	32.29	C
ATOM	1859	C	PHE	A	244	12.252	41.087	30.092	1.00	32.74	C
ATOM	1860	O	PHE	A	244	11.741	41.694	29.162	1.00	32.51	O
ATOM	1861	CB	PHE	A	244	13.963	39.559	29.220	1.00	31.99	C
ATOM	1862	CG	PHE	A	244	15.327	39.446	28.650	1.00	31.29	C
ATOM	1863	CD1	PHE	A	244	16.436	39.886	29.342	1.00	31.05	C
ATOM	1864	CD2	PHE	A	244	15.500	38.861	27.421	1.00	31.04	C
ATOM	1865	CE1	PHE	A	244	17.684	39.733	28.815	1.00	31.37	C
ATOM	1866	CE2	PHE	A	244	16.742	38.709	26.888	1.00	31.39	C
ATOM	1867	CZ	PHE	A	244	17.839	39.141	27.584	1.00	31.77	C
ATOM	1868	N	ASP	A	245	11.547	40.646	31.124	1.00	33.52	N
ATOM	1869	CA	ASP	A	245	10.130	40.946	31.214	1.00	34.33	C
ATOM	1870	C	ASP	A	245	9.831	42.375	31.606	1.00	34.52	C
ATOM	1871	O	ASP	A	245	8.789	42.902	31.251	1.00	34.40	O
ATOM	1872	CB	ASP	A	245	9.448	40.015	32.188	1.00	34.59	C
ATOM	1873	CG	ASP	A	245	9.361	38.639	31.658	1.00	35.47	C
ATOM	1874	OD1	ASP	A	245	9.282	38.519	30.420	1.00	36.40	O
ATOM	1875	OD2	ASP	A	245	9.384	37.624	32.383	1.00	37.65	O
ATOM	1876	N	ASN	A	246	10.737	43.000	32.339	1.00	35.03	N
ATOM	1877	CA	ASN	A	246	10.531	44.364	32.776	1.00	35.38	C
ATOM	1878	C	ASN	A	246	11.873	45.003	32.896	1.00	34.97	C
ATOM	1879	O	ASN	A	246	12.370	45.160	33.994	1.00	35.01	O
ATOM	1880	CB	ASN	A	246	9.843	44.397	34.136	1.00	35.69	C
ATOM	1881	CG	ASN	A	246	9.395	45.800	34.533	1.00	37.41	C
ATOM	1882	OD1	ASN	A	246	9.241	46.691	33.682	1.00	38.99	O
ATOM	1883	ND2	ASN	A	246	9.186	46.006	35.836	1.00	38.90	N
ATOM	1884	N	PRO	A	247	12.468	45.357	31.766	1.00	34.87	N
ATOM	1885	CA	PRO	A	247	13.816	45.931	31.766	1.00	34.87	C
ATOM	1886	C	PRO	A	247	13.868	47.295	32.407	1.00	34.83	C
ATOM	1887	O	PRO	A	247	13.038	48.159	32.127	1.00	34.82	O
ATOM	1888	CB	PRO	A	247	14.184	46.046	30.288	1.00	34.75	C
ATOM	1889	CG	PRO	A	247	13.028	45.475	29.507	1.00	34.95	C
ATOM	1890	CD	PRO	A	247	11.892	45.241	30.419	1.00	34.75	C
ATOM	1891	N	ASP	A	248	14.861	47.448	33.270	1.00	34.67	N
ATOM	1892	CA	ASP	A	248	15.112	48.654	34.003	1.00	34.76	C
ATOM	1893	C	ASP	A	248	16.205	49.419	33.294	1.00	34.89	C
ATOM	1894	O	ASP	A	248	17.395	49.240	33.568	1.00	34.59	O
ATOM	1895	CB	ASP	A	248	15.583	48.265	35.387	1.00	34.87	C
ATOM	1896	CG	ASP	A	248	15.703	49.433	36.329	1.00	35.10	C
ATOM	1897	OD1	ASP	A	248	15.958	50.583	35.902	1.00	34.24	O
ATOM	1898	OD2	ASP	A	248	15.574	49.259	37.550	1.00	36.72	O
ATOM	1899	N	TYR	A	249	15.793	50.302	32.399	1.00	35.08	N
ATOM	1900	CA	TYR	A	249	16.743	51.063	31.615	1.00	35.24	C
ATOM	1901	C	TYR	A	249	17.578	52.071	32.400	1.00	35.48	C

ATOM	1902	O	TYR A 249	18.570	52.567	31.880	1.00	35.44	O
ATOM	1903	CB	TYR A 249	16.021	51.741	30.465	1.00	35.05	C
ATOM	1904	CG	TYR A 249	15.304	50.761	29.586	1.00	34.41	C
ATOM	1905	CD1	TYR A 249	15.977	49.718	28.971	1.00	34.17	C
ATOM	1906	CD2	TYR A 249	13.955	50.865	29.383	1.00	34.14	C
ATOM	1907	CE1	TYR A 249	15.312	48.828	28.172	1.00	33.95	C
ATOM	1908	CE2	TYR A 249	13.287	49.983	28.595	1.00	33.71	C
ATOM	1909	CZ	TYR A 249	13.954	48.974	27.989	1.00	34.19	C
ATOM	1910	OH	TYR A 249	13.232	48.113	27.194	1.00	35.64	O
ATOM	1911	N	GLU A 250	17.207	52.393	33.631	1.00	35.82	N
ATOM	1912	CA	GLU A 250	18.072	53.273	34.399	1.00	36.69	C
ATOM	1913	C	GLU A 250	19.331	52.562	34.834	1.00	36.69	C
ATOM	1914	O	GLU A 250	20.424	53.102	34.715	1.00	36.84	O
ATOM	1915	CB	GLU A 250	17.369	53.836	35.607	1.00	37.10	C
ATOM	1916	CG	GLU A 250	16.173	54.653	35.195	1.00	39.48	C
ATOM	1917	CD	GLU A 250	15.559	55.362	36.359	1.00	42.67	C
ATOM	1918	OE1	GLU A 250	16.128	55.258	37.469	1.00	45.95	O
ATOM	1919	OE2	GLU A 250	14.529	56.030	36.160	1.00	44.93	O
ATOM	1920	N	ARG A 251	19.202	51.344	35.332	1.00	36.55	N
ATOM	1921	CA	ARG A 251	20.389	50.666	35.773	1.00	36.36	C
ATOM	1922	C	ARG A 251	21.124	50.162	34.584	1.00	35.91	C
ATOM	1923	O	ARG A 251	22.347	50.117	34.588	1.00	36.89	O
ATOM	1924	CB	ARG A 251	20.062	49.495	36.697	1.00	36.66	C
ATOM	1925	CG	ARG A 251	19.329	49.936	37.981	1.00	38.10	C
ATOM	1926	CD	ARG A 251	18.848	48.824	38.916	1.00	39.00	C
ATOM	1927	NE	ARG A 251	19.969	48.005	39.371	1.00	40.55	N
ATOM	1928	CZ	ARG A 251	19.895	46.712	39.648	1.00	41.33	C
ATOM	1929	NH1	ARG A 251	18.742	46.068	39.542	1.00	42.58	N
ATOM	1930	NH2	ARG A 251	20.978	46.058	40.025	1.00	41.49	N
ATOM	1931	N	PHE A 252	20.388	49.807	33.545	1.00	35.06	N
ATOM	1932	CA	PHE A 252	20.988	49.065	32.455	1.00	34.37	C
ATOM	1933	C	PHE A 252	20.653	49.675	31.138	1.00	33.82	C
ATOM	1934	O	PHE A 252	20.048	49.042	30.278	1.00	33.57	O
ATOM	1935	CB	PHE A 252	20.429	47.662	32.458	1.00	34.19	C
ATOM	1936	CG	PHE A 252	20.404	47.019	33.803	1.00	33.98	C
ATOM	1937	CD1	PHE A 252	21.559	46.855	34.532	1.00	33.98	C
ATOM	1938	CD2	PHE A 252	19.220	46.560	34.337	1.00	32.84	C
ATOM	1939	CE1	PHE A 252	21.519	46.238	35.760	1.00	33.51	C
ATOM	1940	CE2	PHE A 252	19.189	45.953	35.560	1.00	32.14	C
ATOM	1941	CZ	PHE A 252	20.327	45.789	36.269	1.00	31.96	C
ATOM	1942	N	PRO A 253	21.087	50.903	30.959	1.00	33.27	N
ATOM	1943	CA	PRO A 253	20.677	51.675	29.795	1.00	32.92	C
ATOM	1944	C	PRO A 253	21.008	50.995	28.470	1.00	32.86	C
ATOM	1945	O	PRO A 253	20.215	51.136	27.541	1.00	32.58	O
ATOM	1946	CB	PRO A 253	21.464	52.957	29.962	1.00	32.58	C
ATOM	1947	CG	PRO A 253	22.584	52.562	30.808	1.00	32.44	C
ATOM	1948	CD	PRO A 253	22.038	51.640	31.802	1.00	32.67	C
ATOM	1949	N	ASN A 254	22.108	50.253	28.359	1.00	32.60	N
ATOM	1950	CA	ASN A 254	22.419	49.726	27.037	1.00	32.87	C
ATOM	1951	C	ASN A 254	21.564	48.569	26.615	1.00	32.59	C
ATOM	1952	O	ASN A 254	21.671	48.088	25.503	1.00	32.69	O
ATOM	1953	CB	ASN A 254	23.892	49.414	26.852	1.00	32.72	C
ATOM	1954	CG	ASN A 254	24.710	50.665	26.745	1.00	33.92	C
ATOM	1955	OD1	ASN A 254	25.428	51.022	27.672	1.00	37.05	O
ATOM	1956	ND2	ASN A 254	24.569	51.380	25.626	1.00	34.86	N
ATOM	1957	N	PHE A 255	20.690	48.124	27.491	1.00	32.37	N
ATOM	1958	CA	PHE A 255	19.834	47.057	27.101	1.00	32.19	C
ATOM	1959	C	PHE A 255	18.932	47.578	26.006	1.00	32.36	C
ATOM	1960	O	PHE A 255	18.267	46.819	25.326	1.00	32.64	O
ATOM	1961	CB	PHE A 255	18.990	46.572	28.250	1.00	31.93	C
ATOM	1962	CG	PHE A 255	18.249	45.354	27.918	1.00	31.43	C

ATOM	1963	CD1	PHE	A	255	18.919	44.176	27.718	1.00 33.75	C
ATOM	1964	CD2	PHE	A	255	16.909	45.392	27.718	1.00 31.23	C
ATOM	1965	CE1	PHE	A	255	18.239	43.035	27.367	1.00 34.05	C
ATOM	1966	CE2	PHE	A	255	16.230	44.275	27.380	1.00 32.00	C
ATOM	1967	CZ	PHE	A	255	16.890	43.088	27.203	1.00 32.84	C
ATOM	1968	N	GLN	A	256	18.890	48.888	25.844	1.00 32.46	N
ATOM	1969	CA	GLN	A	256	18.078	49.456	24.794	1.00 32.37	C
ATOM	1970	C	GLN	A	256	18.776	49.342	23.455	1.00 32.34	C
ATOM	1971	O	GLN	A	256	18.260	49.815	22.470	1.00 32.11	O
ATOM	1972	CB	GLN	A	256	17.777	50.924	25.061	1.00 32.28	C
ATOM	1973	CG	GLN	A	256	16.775	51.169	26.144	1.00 32.39	C
ATOM	1974	CD	GLN	A	256	16.823	52.594	26.645	1.00 32.91	C
ATOM	1975	OE1	GLN	A	256	15.830	53.303	26.588	1.00 34.66	O
ATOM	1976	NE2	GLN	A	256	17.982	53.021	27.125	1.00 32.30	N
ATOM	1977	N	ASN	A	257	19.956	48.744	23.404	1.00 32.78	N
ATOM	1978	CA	ASN	A	257	20.634	48.617	22.126	1.00 33.17	C
ATOM	1979	C	ASN	A	257	20.828	47.159	21.763	1.00 34.01	C
ATOM	1980	O	ASN	A	257	21.406	46.841	20.721	1.00 34.41	O
ATOM	1981	CB	ASN	A	257	21.998	49.310	22.140	1.00 32.88	C
ATOM	1982	CG	ASN	A	257	21.928	50.750	22.595	1.00 31.31	C
ATOM	1983	OD1	ASN	A	257	22.471	51.105	23.639	1.00 27.26	O
ATOM	1984	ND2	ASN	A	257	21.283	51.595	21.797	1.00 29.34	N
ATOM	1985	N	VAL	A	258	20.338	46.263	22.606	1.00 34.66	N
ATOM	1986	CA	VAL	A	258	20.565	44.855	22.370	1.00 35.33	C
ATOM	1987	C	VAL	A	258	19.832	44.361	21.130	1.00 35.37	C
ATOM	1988	O	VAL	A	258	18.751	44.832	20.813	1.00 34.96	O
ATOM	1989	CB	VAL	A	258	20.144	44.010	23.558	1.00 35.59	C
ATOM	1990	CG1	VAL	A	258	18.632	43.851	23.604	1.00 35.73	C
ATOM	1991	CG2	VAL	A	258	20.780	42.662	23.428	1.00 36.60	C
ATOM	1992	N	VAL	A	259	20.447	43.418	20.428	1.00 35.87	N
ATOM	1993	CA	VAL	A	259	19.853	42.844	19.230	1.00 36.40	C
ATOM	1994	C	VAL	A	259	20.125	41.355	19.148	1.00 36.66	C
ATOM	1995	O	VAL	A	259	21.282	40.943	19.102	1.00 36.47	O
ATOM	1996	CB	VAL	A	259	20.450	43.459	17.969	1.00 36.47	C
ATOM	1997	CG1	VAL	A	259	19.830	42.822	16.764	1.00 36.75	C
ATOM	1998	CG2	VAL	A	259	20.212	44.931	17.932	1.00 36.66	C
ATOM	1999	N	GLY	A	260	19.066	40.551	19.085	1.00 37.15	N
ATOM	2000	CA	GLY	A	260	19.215	39.096	19.067	1.00 37.50	C
ATOM	2001	C	GLY	A	260	19.132	38.328	17.745	1.00 37.55	C
ATOM	2002	O	GLY	A	260	18.716	38.839	16.704	1.00 37.45	O
ATOM	2003	N	TYR	A	261	19.578	37.079	17.817	1.00 37.54	N
ATOM	2004	CA	TYR	A	261	19.466	36.113	16.744	1.00 37.52	C
ATOM	2005	C	TYR	A	261	18.530	35.107	17.358	1.00 37.09	C
ATOM	2006	O	TYR	A	261	18.788	34.648	18.466	1.00 37.12	O
ATOM	2007	CB	TYR	A	261	20.796	35.429	16.481	1.00 37.79	C
ATOM	2008	CG	TYR	A	261	21.838	36.327	15.874	1.00 39.43	C
ATOM	2009	CD1	TYR	A	261	22.005	36.380	14.507	1.00 41.03	C
ATOM	2010	CD2	TYR	A	261	22.648	37.125	16.662	1.00 41.07	C
ATOM	2011	CE1	TYR	A	261	22.937	37.193	13.940	1.00 41.71	C
ATOM	2012	CE2	TYR	A	261	23.593	37.938	16.093	1.00 41.99	C
ATOM	2013	CZ	TYR	A	261	23.725	37.960	14.728	1.00 42.45	C
ATOM	2014	OH	TYR	A	261	24.650	38.762	14.121	1.00 46.29	O
ATOM	2015	N	GLU	A	262	17.430	34.773	16.699	1.00 36.56	N
ATOM	2016	CA	GLU	A	262	16.500	33.866	17.346	1.00 35.87	C
ATOM	2017	C	GLU	A	262	16.064	32.737	16.447	1.00 35.41	C
ATOM	2018	O	GLU	A	262	16.310	32.747	15.248	1.00 35.03	O
ATOM	2019	CB	GLU	A	262	15.320	34.639	17.943	1.00 35.67	C
ATOM	2020	CG	GLU	A	262	14.085	34.789	17.098	1.00 35.22	C
ATOM	2021	CD	GLU	A	262	13.039	35.601	17.821	1.00 35.62	C
ATOM	2022	OE1	GLU	A	262	13.201	36.833	17.866	1.00 38.15	O
ATOM	2023	OE2	GLU	A	262	12.074	35.031	18.367	1.00 35.12	O

ATOM	2024	N	THR A 263	15.440	31.744	17.060	1.00	35.07	N
ATOM	2025	CA	THR A 263	15.004	30.565	16.351	1.00	34.84	C
ATOM	2026	C	THR A 263	14.138	29.670	17.224	1.00	34.38	C
ATOM	2027	O	THR A 263	14.152	29.745	18.452	1.00	34.07	O
ATOM	2028	CB	THR A 263	16.235	29.767	15.847	1.00	34.75	C
ATOM	2029	OG1	THR A 263	15.864	28.964	14.731	1.00	35.81	O
ATOM	2030	CG2	THR A 263	16.693	28.745	16.837	1.00	34.59	C
ATOM	2031	N	VAL A 264	13.368	28.820	16.573	1.00	34.02	N
ATOM	2032	CA	VAL A 264	12.597	27.854	17.306	1.00	33.95	C
ATOM	2033	C	VAL A 264	13.054	26.460	16.918	1.00	33.60	C
ATOM	2034	O	VAL A 264	12.957	26.065	15.762	1.00	33.27	O
ATOM	2035	CB	VAL A 264	11.112	28.019	17.075	1.00	33.95	C
ATOM	2036	CG1	VAL A 264	10.393	26.788	17.568	1.00	34.24	C
ATOM	2037	CG2	VAL A 264	10.615	29.247	17.823	1.00	33.85	C
ATOM	2038	N	VAL A 265	13.572	25.708	17.880	1.00	33.43	N
ATOM	2039	CA	VAL A 265	13.984	24.354	17.546	1.00	33.48	C
ATOM	2040	C	VAL A 265	12.949	23.321	17.907	1.00	32.85	C
ATOM	2041	O	VAL A 265	12.234	23.441	18.884	1.00	32.91	O
ATOM	2042	CB	VAL A 265	15.332	23.954	18.139	1.00	33.61	C
ATOM	2043	CG1	VAL A 265	16.408	24.721	17.432	1.00	34.56	C
ATOM	2044	CG2	VAL A 265	15.381	24.153	19.636	1.00	33.15	C
ATOM	2045	N	GLY A 266	12.848	22.321	17.064	1.00	32.32	N
ATOM	2046	CA	GLY A 266	11.938	21.240	17.331	1.00	32.27	C
ATOM	2047	C	GLY A 266	12.634	19.905	17.310	1.00	31.78	C
ATOM.	2048	O	GLY A 266	13.852	19.799	17.124	1.00	31.15	O
ATOM	2049	N	PRO A 267	11.827	18.872	17.454	1.00	31.56	N
ATOM	2050	CA	PRO A 267	12.343	17.516	17.547	1.00	31.40	C
ATOM	2051	C	PRO A 267	13.203	17.314	16.336	1.00	31.22	C
ATOM	2052	O	PRO A 267	12.755	17.631	15.241	1.00	31.24	O
ATOM	2053	CB	PRO A 267	11.074	16.664	17.552	1.00	30.81	C
ATOM	2054	CG	PRO A 267	10.048	17.568	18.087	1.00	31.26	C
ATOM	2055	CD	PRO A 267	10.358	18.900	17.451	1.00	31.85	C
ATOM	2056	N	GLY A 268	14.445	16.891	16.536	1.00	31.06	N
ATOM	2057	CA	GLY A 268	15.334	16.620	15.426	1.00	31.07	C
ATOM	2058	C	GLY A 268	16.337	17.703	15.112	1.00	31.31	C
ATOM	2059	O	GLY A 268	17.352	17.425	14.493	1.00	31.12	O
ATOM	2060	N	ASP A 269	16.061	18.939	15.517	1.00	31.87	N
ATOM	2061	CA	ASP A 269	16.975	20.032	15.253	1.00	32.18	C
ATOM	2062	C	ASP A 269	18.117	20.099	16.282	1.00	32.69	C
ATOM	2063	O	ASP A 269	17.974	19.720	17.450	1.00	32.69	O
ATOM	2064	CB	ASP A 269	16.282	21.381	15.390	1.00	32.73	C
ATOM	2065	CG	ASP A 269	15.094	21.583	14.478	1.00	32.07	C
ATOM	2066	OD1	ASP A 269	15.023	21.039	13.367	1.00	33.96	O
ATOM	2067	OD2	ASP A 269	14.191	22.368	14.806	1.00	30.81	O
ATOM	2068	N	VAL A 270	19.234	20.667	15.854	1.00	32.97	N
ATOM	2069	CA	VAL A 270	20.376	20.839	16.715	1.00	32.97	C
ATOM	2070	C	VAL A 270	20.844	22.258	16.579	1.00	32.97	C
ATOM	2071	O	VAL A 270	21.130	22.716	15.488	1.00	33.40	O
ATOM	2072	CB	VAL A 270	21.485	19.896	16.323	1.00	32.94	C
ATOM	2073	CG1	VAL A 270	22.755	20.207	17.066	1.00	33.16	C
ATOM	2074	CG2	VAL A 270	21.069	18.519	16.646	1.00	33.14	C
ATOM	2075	N	LEU A 271	20.883	22.965	17.692	1.00	32.91	N
ATOM	2076	CA	LEU A 271	21.321	24.337	17.690	1.00	32.91	C
ATOM	2077	C	LEU A 271	22.770	24.395	18.129	1.00	32.95	C
ATOM	2078	O	LEU A 271	23.116	23.864	19.161	1.00	32.76	O
ATOM	2079	CB	LEU A 271	20.468	25.159	18.656	1.00	32.64	C
ATOM	2080	CG	LEU A 271	20.896	26.616	18.773	1.00	32.61	C
ATOM	2081	CD1	LEU A 271	20.989	27.276	17.405	1.00	32.23	C
ATOM	2082	CD2	LEU A 271	19.936	27.383	19.638	1.00	33.12	C
ATOM	2083	N	TYR A 272	23.633	25.006	17.333	1.00	33.19	N
ATOM	2084	CA	TYR A 272	24.989	25.215	17.791	1.00	33.39	C

ATOM	2085	C	TYR A 272	25.004	26.517	18.554	1.00	33.40	C
ATOM	2086	O	TYR A 272	24.834	27.560	17.950	1.00	33.42	O
ATOM	2087	CB	TYR A 272	25.991	25.297	16.633	1.00	33.28	C
ATOM	2088	CG	TYR A 272	27.376	25.802	17.039	1.00	32.43	C
ATOM	2089	CD1	TYR A 272	28.005	25.340	18.179	1.00	31.06	C
ATOM	2090	CD2	TYR A 272	28.047	26.746	16.267	1.00	32.28	C
ATOM	2091	CE1	TYR A 272	29.265	25.805	18.544	1.00	30.52	C
ATOM	2092	CE2	TYR A 272	29.300	27.213	16.622	1.00	30.88	C
ATOM	2093	CZ	TYR A 272	29.906	26.737	17.759	1.00	29.92	C
ATOM	2094	OH	TYR A 272	31.146	27.216	18.113	1.00	27.15	O
ATOM	2095	N	ILE A 273	25.178	26.438	19.872	1.00	33.69	N
ATOM	2096	CA	ILE A 273	25.350	27.609	20.734	1.00	33.97	C
ATOM	2097	C	ILE A 273	26.830	27.759	21.068	1.00	34.43	C
ATOM	2098	O	ILE A 273	27.332	27.113	21.998	1.00	34.76	O
ATOM	2099	CB	ILE A 273	24.595	27.436	22.032	1.00	33.75	C
ATOM	2100	CG1	ILE A 273	23.122	27.219	21.749	1.00	33.59	C
ATOM	2101	CG2	ILE A 273	24.779	28.654	22.896	1.00	33.60	C
ATOM	2102	CD1	ILE A 273	22.306	26.986	22.984	1.00	33.23	C
ATOM	2103	N	PRO A 274	27.519	28.630	20.345	1.00	34.61	N
ATOM	2104	CA	PRO A 274	28.965	28.780	20.485	1.00	34.92	C
ATOM	2105	C	PRO A 274	29.348	29.378	21.803	1.00	35.17	C
ATOM	2106	O	PRO A 274	28.639	30.252	22.300	1.00	35.16	O
ATOM	2107	CB	PRO A 274	29.333	29.771	19.382	1.00	35.09	C
ATOM	2108	CG	PRO A 274	28.113	29.929	18.551	1.00	35.02	C
ATOM	2109	CD	PRO A 274	26.957	29.584	19.388	1.00	34.69	C
ATOM	2110	N	MET A 275	30.476	28.927	22.339	1.00	35.69	N
ATOM	2111	CA	MET A 275	30.982	29.399	23.622	1.00	36.15	C
ATOM	2112	C	MET A 275	30.981	30.917	23.754	1.00	36.09	C
ATOM	2113	O	MET A 275	31.316	31.635	22.805	1.00	36.23	O
ATOM	2114	CB	MET A 275	32.400	28.928	23.805	1.00	36.23	C
ATOM	2115	CG	MET A 275	32.813	28.928	25.229	1.00	38.02	C
ATOM	2116	SD	MET A 275	34.361	28.108	25.442	1.00	42.07	S
ATOM	2117	CE	MET A 275	35.330	28.680	23.895	1.00	42.34	C
ATOM	2118	N	TYR A 276	30.611	31.401	24.935	1.00	35.76	N
ATOM	2119	CA	TYR A 276	30.574	32.833	25.191	1.00	35.62	C
ATOM	2120	C	TYR A 276	29.339	33.513	24.555	1.00	35.32	C
ATOM	2121	O	TYR A 276	29.048	34.653	24.866	1.00	35.15	O
ATOM	2122	CB	TYR A 276	31.921	33.510	24.804	1.00	35.75	C
ATOM	2123	CG	TYR A 276	33.049	33.221	25.822	1.00	35.70	C
ATOM	2124	CD1	TYR A 276	33.036	33.805	27.077	1.00	34.51	C
ATOM	2125	CD2	TYR A 276	34.103	32.356	25.521	1.00	35.30	C
ATOM	2126	CE1	TYR A 276	34.013	33.549	27.997	1.00	34.63	C
ATOM	2127	CE2	TYR A 276	35.100	32.085	26.446	1.00	35.01	C
ATOM	2128	CZ	TYR A 276	35.055	32.685	27.695	1.00	35.73	C
ATOM	2129	OH	TYR A 276	36.051	32.433	28.657	1.00	34.27	O
ATOM	2130	N	TRP A 277	28.573	32.838	23.708	1.00	35.19	N
ATOM	2131	CA	TRP A 277	27.353	33.491	23.224	1.00	35.20	C
ATOM	2132	C	TRP A 277.	26.245	33.424	24.245	1.00	35.16	C
ATOM	2133	O	TRP A 277	25.947	32.369	24.797	1.00	35.08	O
ATOM	2134	CB	TRP A 277	26.806	32.880	21.944	1.00	35.27	C
ATOM	2135	CG	TRP A 277	27.538	33.286	20.784	1.00	34.70	C
ATOM	2136	CD1	TRP A 277	28.858	33.128	20.579	1.00	35.11	C
ATOM	2137	CD2	TRP A 277	27.020	33.945	19.639	1.00	35.27	C
ATOM	2138	NE1	TRP A 277	29.213	33.648	19.361	1.00	35.58	N
ATOM	2139	CE2	TRP A 277	28.094	34.156	18.761	1.00	34.89	C
ATOM	2140	CE3	TRP A 277	25.751	34.388	19.258	1.00	35.56	C
ATOM	2141	CZ2	TRP A 277	27.946	34.781	17.543	1.00	32.83	C
ATOM	2142	CZ3	TRP A 277	25.612	35.012	18.041	1.00	34.41	C
ATOM	2143	CH2	TRP A 277	26.704	35.199	17.201	1.00	33.11	C
ATOM	2144	N	TRP A 278	25.597	34.555	24.457	1.00	35.11	N
ATOM	2145	CA	TRP A 278	24.501	34.612	25.388	1.00	35.03	C

ATOM	2146	C	TRP A 278	23.334	33.859	24.838	1.00	35.14	C
ATOM	2147	O	TRP A 278	23.068	33.939	23.637	1.00	35.16	O
ATOM	2148	CB	TRP A 278	24.047	36.030	25.553	1.00	34.94	C
ATOM	2149	CG	TRP A 278	25.025	36.909	26.185	1.00	35.52	C
ATOM	2150	CD1	TRP A 278	26.030	37.597	25.584	1.00	35.77	C
ATOM	2151	CD2	TRP A 278	25.071	37.244	27.560	1.00	36.19	C
ATOM	2152	NE1	TRP A 278	26.713	38.336	26.518	1.00	36.09	N
ATOM	2153	CE2	TRP A 278	26.133	38.132	27.741	1.00	36.37	C
ATOM	2154	CE3	TRP A 278	24.312	36.876	28.668	1.00	36.48	C
ATOM	2155	CZ2	TRP A 278	26.463	38.637	28.976	1.00	37.12	C
ATOM	2156	CZ3	TRP A 278	24.636	37.375	29.877	1.00	36.37	C
ATOM	2157	CH2	TRP A 278	25.701	38.246	30.032	1.00	36.92	C
ATOM	2158	N	HIS A 279	22.620	33.133	25.692	1.00	35.10	N
ATOM	2159	CA	HIS A 279	21.400	32.516	25.218	1.00	35.20	C
ATOM	2160	C	HIS A 279	20.300	32.555	26.231	1.00	34.69	C
ATOM	2161	O	HIS A 279	20.540	32.348	27.414	1.00	34.75	O
ATOM	2162	CB	HIS A 279	21.624	31.079	24.764	1.00	35.73	C
ATOM	2163	CG	HIS A 279	22.403	30.236	25.727	1.00	37.15	C
ATOM	2164	ND1	HIS A 279	23.775	30.295	25.819	1.00	39.54	N
ATOM	2165	CD2	HIS A 279	22.010	29.283	26.609	1.00	38.10	C
ATOM	2166	CE1	HIS A 279	24.194	29.425	26.726	1.00	39.33	C
ATOM	2167	NE2	HIS A 279	23.143	28.797	27.221	1.00	37.68	N
ATOM	2168	N	HIS A 280	19.092	32.795	25.721	1.00	34.17	N
ATOM	2169	CA	HIS A 280	17.850	32.854	26.483	1.00	33.72	C
ATOM	2170	C	HIS A 280	16.960	31.779	25.901	1.00	33.50	C
ATOM	2171	O	HIS A 280	16.730	31.765	24.705	1.00	33.21	O
ATOM	2172	CB	HIS A 280	17.215	34.208	26.257	1.00	33.58	C
ATOM	2173	CG	HIS A 280	15.733	34.247	26.468	1.00	33.92	C
ATOM	2174	ND1	HIS A 280	15.151	34.997	27.464	1.00	33.67	N
ATOM	2175	CD2	HIS A 280	14.711	33.680	25.779	1.00	34.05	C
ATOM	2176	CE1	HIS A 280	13.838	34.874	27.395	1.00	33.47	C
ATOM	2177	NE2	HIS A 280	13.545	34.078	26.384	1.00	33.19	N
ATOM	2178	N	ILE A 281	16.425	30.892	26.723	1.00	33.62	N
ATOM	2179	CA	ILE A 281	15.699	29.755	26.176	1.00	33.56	C
ATOM	2180	C	ILE A 281	14.358	29.554	26.806	1.00	33.01	C
ATOM	2181	O	ILE A 281	14.242	29.475	28.012	1.00	32.55	O
ATOM	2182	CB	ILE A 281	16.554	28.501	26.300	1.00	33.91	C
ATOM	2183	CG1	ILE A 281	17.699	28.600	25.295	1.00	35.00	C
ATOM	2184	CG2	ILE A 281	15.752	27.277	25.988	1.00	34.05	C
ATOM	2185	CD1	ILE A 281	18.797	27.663	25.562	1.00	36.33	C
ATOM	2186	N	GLU A 282	13.343	29.445	25.960	1.00	33.12	N
ATOM	2187	CA	GLU A 282	11.977	29.342	26.441	1.00	33.13	C
ATOM	2188	C	GLU A 282	11.168	28.219	25.777	1.00	32.96	C
ATOM	2189	O	GLU A 282	11.252	27.988	24.577	1.00	32.94	O
ATOM	2190	CB	GLU A 282	11.290	30.707	26.327	1.00	33.06	C
ATOM	2191	CG	GLU A 282	11.065	31.250	24.925	1.00	33.43	C
ATOM	2192	CD	GLU A 282	10.529	32.682	24.951	1.00	33.96	C
ATOM	2193	OE1	GLU A 282	11.071	33.500	25.703	1.00	34.61	O
ATOM	2194	OE2	GLU A 282	9.563	33.009	24.236	1.00	35.15	O
ATOM	2195	N	SER A 283	10.431	27.497	26.607	1.00	32.96	N
ATOM	2196	CA	SER A 283	9.571	26.420	26.169	1.00	33.51	C
ATOM	2197	C	SER A 283	8.247	27.070	25.784	1.00	34.03	C
ATOM	2198	O	SER A 283	7.654	27.772	26.597	1.00	34.19	O
ATOM	2199	CB	SER A 283	9.375	25.408	27.303	1.00	33.43	C
ATOM	2200	OG	SER A 283	10.371	24.393	27.280	1.00	32.99	O
ATOM	2201	N	LEU A 284	7.769	26.828	24.565	1.00	34.36	N
ATOM	2202	CA	LEU A 284	6.610	27.553	24.081	1.00	34.81	C
ATOM	2203	C	LEU A 284	5.399	27.454	24.982	1.00	35.14	C
ATOM	2204	O	LEU A 284	5.128	26.425	25.599	1.00	35.08	O
ATOM	2205	CB	LEU A 284	6.226	27.131	22.670	1.00	35.02	C
ATOM	2206	CG	LEU A 284	7.302	27.255	21.596	1.00	35.52	C

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ATOM   2207  CD1 LEU A 284      6.675  27.427  20.231  1.00 36.06        C
ATOM   2208  CD2 LEU A 284      8.197  28.404  21.862  1.00 36.37        C
ATOM   2209  N   LEU A 285      4.674  28.561  25.040  1.00 35.48        N
ATOM   2210  CA  LEU A 285      3.481  28.641  25.832  1.00 35.85        C
ATOM   2211  C   LEU A 285      2.509  27.670  25.255  1.00 36.11        C
ATOM   2212  O   LEU A 285      2.314  27.623  24.041  1.00 36.34        O
ATOM   2213  CB  LEU A 285      2.876  30.024  25.742  1.00 35.90        C
ATOM   2214  CG  LEU A 285      3.740  31.116  26.343  1.00 36.22        C
ATOM   2215  CD1 LEU A 285      3.271  32.449  25.821  1.00 36.13        C
ATOM   2216  CD2 LEU A 285      3.701  31.034  27.861  1.00 36.27        C
ATOM   2217  N   ASN A 286      1.909  26.879  26.128  1.00 36.14        N
ATOM   2218  CA  ASN A 286      0.890  25.958  25.703  1.00 36.04        C
ATOM   2219  C   ASN A 286      1.373  24.932  24.663  1.00 35.65        C
ATOM   2220  O   ASN A 286      0.593  24.471  23.833  1.00 35.84        O
ATOM   2221  CB  ASN A 286     -0.283  26.792  25.191  1.00 36.33        C
ATOM   2222  CG  ASN A 286     -0.805  27.766  26.254  1.00 36.97        C
ATOM   2223  OD1 ASN A 286     -1.266  27.346  27.316  1.00 37.84        O
ATOM   2224  ND2 ASN A 286     -0.716  29.067  25.977  1.00 37.29        N
ATOM   2225  N   GLY A 287      2.648  24.550  24.736  1.00 35.18        N
ATOM   2226  CA  GLY A 287      3.220  23.588  23.806  1.00 34.71        C
ATOM   2227  C   GLY A 287      3.556  22.252  24.428  1.00 34.44        C
ATOM   2228  O   GLY A 287      4.071  21.349  23.764  1.00 34.53        O
ATOM   2229  N   GLY A 288      3.255  22.106  25.706  1.00 34.18        N
ATOM   2230  CA  GLY A 288      3.521  20.858  26.371  1.00 34.22        C
ATOM   2231  C   GLY A 288      4.964  20.793  26.766  1.00 34.25        C
ATOM   2232  O   GLY A 288      5.727  21.719  26.523  1.00 34.28        O
ATOM   2233  N   ILE A 289      5.351  19.674  27.349  1.00 34.55        N
ATOM   2234  CA  ILE A 289      6.671  19.572  27.918  1.00 34.83        C
ATOM   2235  C   ILE A 289      7.702  19.529  26.837  1.00 34.87        C
ATOM   2236  O   ILE A 289      7.417  19.196  25.687  1.00 35.21        O
ATOM   2237  CB  ILE A 289      6.815  18.325  28.786  1.00 35.01        C
ATOM   2238  CG1 ILE A 289      7.018  17.091  27.924  1.00 35.30        C
ATOM   2239  CG2 ILE A 289      5.610  18.143  29.694  1.00 35.22        C
ATOM   2240  CD1 ILE A 289      7.654  15.972  28.698  1.00 35.70        C
ATOM   2241  N   THR A 290      8.921  19.853  27.219  1.00 34.80        N
ATOM   2242  CA  THR A 290     10.001  19.849  26.273  1.00 34.64        C
ATOM   2243  C   THR A 290     11.103  18.951  26.740  1.00 34.30        C
ATOM   2244  O   THR A 290     11.286  18.742  27.924  1.00 34.66        O
ATOM   2245  CB  THR A 290     10.522  21.258  26.094  1.00 34.75        C
ATOM   2246  OG1 THR A 290     10.747  21.863  27.375  1.00 34.33        O
ATOM   2247  CG2 THR A 290      9.455  22.105  25.458  1.00 34.98        C
ATOM   2248  N   ILE A 291     11.832  18.395  25.802  1.00 33.95        N
ATOM   2249  CA  ILE A 291     12.940  17.576  26.176  1.00 34.07        C
ATOM   2250  C   ILE A 291     14.091  17.963  25.310  1.00 33.73        C
ATOM   2251  O   ILE A 291     13.933  18.203  24.125  1.00 33.83        O
ATOM   2252  CB  ILE A 291     12.590  16.111  26.029  1.00 34.23        C
ATOM   2253  CG1 ILE A 291     11.439  15.793  26.967  1.00 34.84        C
ATOM   2254  CG2 ILE A 291     13.758  15.248  26.429  1.00 34.60        C
ATOM   2255  CD1 ILE A 291     11.021  14.384  26.946  1.00 35.22        C
ATOM   2256  N   THR A 292     15.254  18.062  25.913  1.00 33.47        N
ATOM   2257  CA  THR A 292     16.410  18.418  25.158  1.00 33.68        C
ATOM   2258  C   THR A 292     17.579  17.741  25.748  1.00 33.73        C
ATOM   2259  O   THR A 292     17.623  17.472  26.942  1.00 33.28        O
ATOM   2260  CB  THR A 292     16.725  19.921  25.265  1.00 33.93        C
ATOM   2261  OG1 THR A 292     15.590  20.725  24.921  1.00 33.80        O
ATOM   2262  CG2 THR A 292     17.774  20.293  24.245  1.00 34.05        C
ATOM   2263  N   VAL A 293     18.565  17.518  24.906  1.00 34.13        N
ATOM   2264  CA  VAL A 293     19.821  17.030  25.391  1.00 34.56        C
ATOM   2265  C   VAL A 293     20.935  17.867  24.813  1.00 34.79        C
ATOM   2266  O   VAL A 293     21.039  18.017  23.600  1.00 34.88        O
ATOM   2267  CB  VAL A 293     20.029  15.603  25.019  1.00 34.66        C
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ATOM   2268  CG1 VAL A 293    21.473  15.238  25.222  1.00 35.24        C
ATOM   2269  CG2 VAL A 293    19.141  14.741  25.880  1.00 35.15        C
ATOM   2270  N   ASN A 294    21.768  18.433  25.681  1.00 34.82        N
ATOM   2271  CA  ASN A 294    22.890  19.187  25.174  1.00 34.61        C
ATOM   2272  C   ASN A 294    24.159  18.372  25.251  1.00 34.68        C
ATOM   2273  O   ASN A 294    24.220  17.350  25.934  1.00 34.28        O
ATOM   2274  CB  ASN A 294    23.036  20.571  25.829  1.00 34.77        C
ATOM   2275  CG  ASN A 294    23.676  20.533  27.197  1.00 33.90        C
ATOM   2276  OD1 ASN A 294    24.170  19.504  27.653  1.00 36.35        O
ATOM   2277  ND2 ASN A 294    23.658  21.670  27.868  1.00 30.46        N
ATOM   2278  N   PHE A 295    25.141  18.870  24.510  1.00 34.93        N
ATOM   2279  CA  PHE A 295    26.450  18.291  24.326  1.00 35.27        C
ATOM   2280  C   PHE A 295    27.467  19.411  24.552  1.00 35.69        C
ATOM   2281  O   PHE A 295    27.610  20.288  23.698  1.00 35.68        O
ATOM   2282  CB  PHE A 295    26.581  17.832  22.875  1.00 35.33        C
ATOM   2283  CG  PHE A 295    25.858  16.554  22.545  1.00 34.85        C
ATOM   2284  CD1 PHE A 295    24.492  16.549  22.332  1.00 35.36        C
ATOM   2285  CD2 PHE A 295    26.559  15.371  22.383  1.00 33.46        C
ATOM   2286  CE1 PHE A 295    23.841  15.378  21.996  1.00 35.19        C
ATOM   2287  CE2 PHE A 295    25.918  14.207  22.048  1.00 33.20        C
ATOM   2288  CZ  PHE A 295    24.566  14.202  21.853  1.00 34.09        C
ATOM   2289  N   TRP A 296    28.182  19.369  25.677  1.00 36.18        N
ATOM   2290  CA  TRP A 296    29.113  20.433  26.073  1.00 36.34        C
ATOM   2291  C   TRP A 296    30.534  19.963  25.938  1.00 36.50        C
ATOM   2292  O   TRP A 296    30.932  18.969  26.563  1.00 36.32        O
ATOM   2293  CB  TRP A 296    28.913  20.830  27.541  1.00 36.57        C
ATOM   2294  CG  TRP A 296    27.934  21.912  27.776  1.00 37.38        C
ATOM   2295  CD1 TRP A 296    26.997  22.361  26.909  1.00 38.36        C
ATOM   2296  CD2 TRP A 296    27.787  22.693  28.965  1.00 39.42        C
ATOM   2297  NE1 TRP A 296    26.275  23.384  27.473  1.00 38.20        N
ATOM   2298  CE2 TRP A 296    26.737  23.605  28.736  1.00 38.86        C
ATOM   2299  CE3 TRP A 296    28.450  22.730  30.204  1.00 40.74        C
ATOM   2300  CZ2 TRP A 296    26.327  24.529  29.682  1.00 41.03        C
ATOM   2301  CZ3 TRP A 296    28.037  23.665  31.160  1.00 40.86        C
ATOM   2302  CH2 TRP A 296    26.989  24.544  30.891  1.00 41.52        C
ATOM   2303  N   TYR A 297    31.303  20.719  25.162  1.00 36.60        N
ATOM   2304  CA  TYR A 297    32.703  20.442  24.923  1.00 36.79        C
ATOM   2305  C   TYR A 297    33.534  21.597  25.457  1.00 36.96        C
ATOM   2306  O   TYR A 297    33.117  22.734  25.363  1.00 36.32        O
ATOM   2307  CB  TYR A 297    32.923  20.291  23.423  1.00 36.93        C
ATOM   2308  CG  TYR A 297    32.280  19.054  22.868  1.00 37.30        C
ATOM   2309  CD1 TYR A 297    30.939  19.046  22.523  1.00 37.28        C
ATOM   2310  CD2 TYR A 297    33.008  17.880  22.716  1.00 36.72        C
ATOM   2311  CE1 TYR A 297    30.346  17.907  22.039  1.00 37.15        C
ATOM   2312  CE2 TYR A 297    32.423  16.747  22.226  1.00 35.89        C
ATOM   2313  CZ  TYR A 297    31.088  16.764  21.893  1.00 36.57        C
ATOM   2314  OH  TYR A 297    30.467  15.641  21.405  1.00 36.99        O
ATOM   2315  N   LYS A 298    34.696  21.303  26.039  1.00 37.93        N
ATOM   2316  CA  LYS A 298    35.615  22.347  26.495  1.00 38.45        C
ATOM   2317  C   LYS A 298    36.090  22.994  25.236  1.00 38.43        C
ATOM   2318  O   LYS A 298    36.245  22.320  24.229  1.00 38.55        O
ATOM   2319  CB  LYS A 298    36.835  21.782  27.233  1.00 38.67        C
ATOM   2320  CG  LYS A 298    36.634  21.550  28.737  1.00 40.58        C
ATOM   2321  CD  LYS A 298    37.928  21.093  29.484  1.00 42.63        C
ATOM   2322  CE  LYS A 298    37.631  20.622  30.951  1.00 44.00        C
ATOM   2323  NZ  LYS A 298    38.841  20.251  31.812  1.00 43.61        N
ATOM   2324  N   GLY A 299    36.347  24.286  25.277  1.00 38.82        N
ATOM   2325  CA  GLY A 299    36.768  24.976  24.080  1.00 39.19        C
ATOM   2326  C   GLY A 299    38.174  24.582  23.719  1.00 39.60        C
ATOM   2327  O   GLY A 299    38.859  23.930  24.502  1.00 39.93        O
ATOM   2328  N   ALA A 300    38.594  24.963  22.520  1.00 40.20        N
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ATOM	2329	CA	ALA	A	300	39.963	24.751	22.072	1.00	40.70	C
ATOM	2330	C	ALA	A	300	40.917	25.588	22.929	1.00	41.18	C
ATOM	2331	O	ALA	A	300	40.483	26.417	23.722	1.00	41.25	O
ATOM	2332	CB	ALA	A	300	40.085	25.143	20.616	1.00	40.64	C
ATOM	2333	N	PRO	A	301	42.215	25.408	22.733	1.00	41.91	N
ATOM	2334	CA	PRO	A	301	43.213	26.102	23.542	1.00	42.49	C
ATOM	2335	C	PRO	A	301	43.448	27.541	23.128	1.00	43.14	C
ATOM	2336	O	PRO	A	301	43.323	27.899	21.962	1.00	43.31	O
ATOM	2337	CB	PRO	A	301	44.483	25.326	23.230	1.00	42.38	C
ATOM	2338	CG	PRO	A	301	44.300	24.924	21.833	1.00	42.16	C
ATOM	2339	CD	PRO	A	301	42.851	24.571	21.701	1.00	41.99	C
ATOM	2340	N	THR	A	302	43.823	28.343	24.112	1.00	43.86	N
ATOM	2341	CA	THR	A	302	44.199	29.726	23.915	1.00	44.26	C
ATOM	2342	C	THR	A	302	45.588	29.732	23.318	1.00	44.56	C
ATOM	2343	O	THR	A	302	46.524	29.337	24.011	1.00	44.82	O
ATOM	2344	CB	THR	A	302	44.284	30.383	25.277	1.00	44.20	C
ATOM	2345	OG1	THR	A	302	43.030	30.253	25.956	1.00	45.23	O
ATOM	2346	CG2	THR	A	302	44.512	31.858	25.138	1.00	44.53	C
ATOM	2347	N	PRO	A	303	45.770	30.229	22.091	1.00	44.72	N
ATOM	2348	CA	PRO	A	303	47.083	30.128	21.438	1.00	44.51	C
ATOM	2349	C	PRO	A	303	48.177	30.759	22.306	1.00	44.48	C
ATOM	2350	O	PRO	A	303	47.835	31.522	23.221	1.00	44.02	O
ATOM	2351	CB	PRO	A	303	46.897	30.929	20.145	1.00	44.55	C
ATOM	2352	CG	PRO	A	303	45.426	30.929	19.904	1.00	44.28	C
ATOM	2353	CD	PRO	A	303	44.834	31.040	21.288	1.00	44.71	C
ATOM	2354	N	GLU	A	307	46.829	36.983	18.732	1.00	42.48	N
ATOM	2355	CA	GLU	A	307	46.845	37.952	17.646	1.00	42.70	C
ATOM	2356	C	GLU	A	307	45.812	39.039	17.801	1.00	42.57	C
ATOM	2357	O	GLU	A	307	44.654	38.807	18.138	1.00	42.62	O
ATOM	2358	CB	GLU	A	307	46.624	37.296	16.284	1.00	43.00	C
ATOM	2359	CG	GLU	A	307	46.980	38.235	15.127	1.00	43.85	C
ATOM	2360	CD	GLU	A	307	47.091	37.541	13.779	1.00	44.71	C
ATOM	2361	OE1	GLU	A	307	46.618	36.385	13.643	1.00	45.10	O
ATOM	2362	OE2	GLU	A	307	47.649	38.170	12.851	1.00	45.60	O
ATOM	2363	N	TYR	A	308	46.249	40.243	17.503	1.00	42.66	N
ATOM	2364	CA	TYR	A	308	45.384	41.379	17.577	1.00	42.64	C
ATOM	2365	C	TYR	A	308	44.814	41.530	16.189	1.00	42.85	C
ATOM	2366	O	TYR	A	308	45.413	41.066	15.203	1.00	43.43	O
ATOM	2367	CB	TYR	A	308	46.184	42.565	18.034	1.00	42.47	C
ATOM	2368	CG	TYR	A	308	46.744	42.281	19.399	1.00	43.35	C
ATOM	2369	CD1	TYR	A	308	45.996	42.552	20.534	1.00	44.58	C
ATOM	2370	CD2	TYR	A	308	47.986	41.681	19.559	1.00	43.97	C
ATOM	2371	CE1	TYR	A	308	46.482	42.284	21.790	1.00	45.23	C
ATOM	2372	CE2	TYR	A	308	48.483	41.401	20.818	1.00	44.79	C
ATOM	2373	CZ	TYR	A	308	47.726	41.708	21.935	1.00	45.46	C
ATOM	2374	OH	TYR	A	308	48.200	41.453	23.207	1.00	45.86	O
ATOM	2375	N	PRO	A	309	43.631	42.119	16.111	1.00	42.47	N
ATOM	2376	CA	PRO	A	309	42.930	42.648	17.285	1.00	42.08	C
ATOM	2377	C	PRO	A	309	42.209	41.528	18.051	1.00	41.24	C
ATOM	2378	O	PRO	A	309	41.774	40.578	17.408	1.00	40.92	O
ATOM	2379	CB	PRO	A	309	41.910	43.583	16.652	1.00	42.39	C
ATOM	2380	CG	PRO	A	309	41.574	42.895	15.337	1.00	42.16	C
ATOM	2381	CD	PRO	A	309	42.843	42.260	14.874	1.00	42.28	C
ATOM	2382	N	LEU	A	310	42.059	41.654	19.372	1.00	40.25	N
ATOM	2383	CA	LEU	A	310	41.436	40.596	20.180	1.00	39.46	C
ATOM	2384	C	LEU	A	310	39.971	40.434	19.884	1.00	38.93	C
ATOM	2385	O	LEU	A	310	39.288	41.412	19.624	1.00	39.65	O
ATOM	2386	CB	LEU	A	310	41.526	40.916	21.658	1.00	39.21	C
ATOM	2387	CG	LEU	A	310	42.486	40.099	22.508	1.00	38.87	C
ATOM	2388	CD1	LEU	A	310	43.727	39.738	21.750	1.00	38.58	C
ATOM	2389	CD2	LEU	A	310	42.817	40.926	23.735	1.00	39.01	C

ATOM	2390	N	LYS A 311	39.462	39.217	19.957	1.00	37.90	N
ATOM	2391	CA	LYS A 311	38.036	39.029	19.731	1.00	37.53	C
ATOM	2392	C	LYS A 311	37.217	39.359	20.978	1.00	36.85	C
ATOM	2393	O	LYS A 311	37.705	39.272	22.092	1.00	36.85	O
ATOM	2394	CB	LYS A 311	37.746	37.609	19.274	1.00	37.54	C
ATOM	2395	N	ALA A 312	35.965	39.736	20.793	1.00	36.18	N
ATOM	2396	CA	ALA A 312	35.112	40.015	21.937	1.00	35.92	C
ATOM	2397	C	ALA A 312	35.232	38.994	23.058	1.00	35.88	C
ATOM	2398	O	ALA A 312	35.347	39.384	24.213	1.00	35.99	O
ATOM	2399	CB	ALA A 312	33.665	40.115	21.526	1.00	35.50	C
ATOM	2400	N	HIS A 313	35.221	37.700	22.739	1.00	35.71	N
ATOM	2401	CA	HIS A 313	35.136	36.709	23.797	1.00	35.52	C
ATOM	2402	C	HIS A 313	36.429	36.694	24.517	1.00	35.31	C
ATOM	2403	O	HIS A 313	36.489	36.278	25.667	1.00	35.53	O
ATOM	2404	CB	HIS A 313	34.768	35.291	23.313	1.00	35.89	C
ATOM	2405	CG	HIS A 313	35.844	34.613	22.535	1.00	36.41	C
ATOM	2406	ND1	HIS A 313	36.097	34.905	21.214	1.00	38.71	N
ATOM	2407	CD2	HIS A 313	36.741	33.665	22.889	1.00	37.90	C
ATOM	2408	CE1	HIS A 313	37.111	34.175	20.789	1.00	38.65	C
ATOM	2409	NE2	HIS A 313	37.524	33.416	21.788	1.00	38.60	N
ATOM	2410	N	GLN A 314	37.478	37.162	23.861	1.00	35.08	N
ATOM	2411	CA	GLN A 314	38.760	37.203	24.535	1.00	35.00	C
ATOM	2412	C	GLN A 314	38.706	38.301	25.576	1.00	34.62	C
ATOM	2413	O	GLN A 314	39.145	38.109	26.703	1.00	34.28	O
ATOM	2414	CB	GLN A 314	39.924	37.399	23.558	1.00	35.10	C
ATOM	2415	CG	GLN A 314	40.091	36.229	22.597	1.00	35.42	C
ATOM	2416	CD	GLN A 314	41.107	36.478	21.500	1.00	35.10	C
ATOM	2417	OE1	GLN A 314	40.938	37.377	20.671	1.00	35.86	O
ATOM	2418	NE2	GLN A 314	42.150	35.666	21.476	1.00	34.32	N
ATOM	2419	N	LYS A 315	38.173	39.454	25.197	1.00	34.70	N
ATOM	2420	CA	LYS A 315	38.009	40.539	26.152	1.00	35.01	C
ATOM	2421	C	LYS A 315	37.164	40.063	27.320	1.00	34.67	C
ATOM	2422	O	LYS A 315	37.485	40.325	28.467	1.00	34.81	O
ATOM	2423	CB	LYS A 315	37.395	41.766	25.501	1.00	35.19	C
ATOM	2424	CG	LYS A 315	38.344	42.447	24.563	1.00	35.85	C
ATOM	2425	CD	LYS A 315	37.703	43.636	23.931	1.00	37.25	C
ATOM	2426	CE	LYS A 315	38.657	44.348	23.001	1.00	39.28	C
ATOM	2427	NZ	LYS A 315	37.969	45.430	22.222	1.00	40.34	N
ATOM	2428	N	VAL A 316	36.117	39.314	27.040	1.00	34.30	N
ATOM	2429	CA	VAL A 316	35.321	38.787	28.118	1.00	34.31	C
ATOM	2430	C	VAL A 316	36.175	37.925	29.047	1.00	34.37	C
ATOM	2431	O	VAL A 316	36.071	38.023	30.273	1.00	34.57	O
ATOM	2432	CB	VAL A 316	34.138	37.992	27.606	1.00	34.39	C
ATOM	2433	CG1	VAL A 316	33.334	37.434	28.794	1.00	34.91	C
ATOM	2434	CG2	VAL A 316	33.258	38.873	26.719	1.00	33.60	C
ATOM	2435	N	ALA A 317	37.011	37.072	28.475	1.00	34.24	N
ATOM	2436	CA	ALA A 317	37.907	36.267	29.288	1.00	34.17	C
ATOM	2437	C	ALA A 317	38.744	37.160	30.166	1.00	34.10	C
ATOM	2438	O	ALA A 317	38.919	36.906	31.352	1.00	33.87	O
ATOM	2439	CB	ALA A 317	38.813	35.459	28.431	1.00	34.02	C
ATOM	2440	N	ILE A 318	39.274	38.216	29.574	1.00	34.29	N
ATOM	2441	CA	ILE A 318	40.178	39.062	30.322	1.00	34.26	C
ATOM	2442	C	ILE A 318	39.467	39.611	31.546	1.00	33.99	C
ATOM	2443	O	ILE A 318	39.993	39.556	32.661	1.00	33.96	O
ATOM	2444	CB	ILE A 318	40.755	40.171	29.447	1.00	33.98	C
ATOM	2445	CG1	ILE A 318	41.775	39.558	28.489	1.00	34.02	C
ATOM	2446	CG2	ILE A 318	41.429	41.188	30.323	1.00	33.92	C
ATOM	2447	CD1	ILE A 318	42.356	40.498	27.428	1.00	33.97	C
ATOM	2448	N	MET A 319	38.241	40.068	31.337	1.00	33.55	N
ATOM	2449	CA	MET A 319	37.499	40.741	32.383	1.00	33.41	C
ATOM	2450	C	MET A 319	37.196	39.772	33.496	1.00	33.38	C

ATOM	2451	O	MET A 319	37.238	40.101	34.669	1.00	33.32	O
ATOM	2452	CB	MET A 319	36.193	41.308	31.827	1.00	33.31	C
ATOM	2453	CG	MET A 319	36.361	42.521	30.951	1.00	32.96	C
ATOM	2454	SD	MET A 319	34.812	43.355	30.617	1.00	33.05	S
ATOM	2455	CE	MET A 319	34.119	42.299	29.410	1.00	33.43	C
ATOM	2456	N	ARG A 320	36.873	38.558	33.121	1.00	33.68	N
ATOM	2457	CA	ARG A 320	36.575	37.568	34.112	1.00	33.61	C
ATOM	2458	C	ARG A 320	37.796	37.392	34.996	1.00	33.82	C
ATOM	2459	O	ARG A 320	37.719	37.448	36.225	1.00	33.48	O
ATOM	2460	CB	ARG A 320	36.211	36.292	33.402	1.00	33.39	C
ATOM	2461	CG	ARG A 320	34.875	36.406	32.725	1.00	33.88	C
ATOM	2462	CD	ARG A 320	34.268	35.080	32.340	1.00	34.20	C
ATOM	2463	NE	ARG A 320	34.217	34.215	33.507	1.00	33.14	N
ATOM	2464	CZ	ARG A 320	33.159	34.103	34.260	1.00	33.15	C
ATOM	2465	NH1	ARG A 320	32.077	34.762	33.933	1.00	33.83	N
ATOM	2466	NH2	ARG A 320	33.170	33.338	35.331	1.00	34.46	N
ATOM	2467	N	ASN A 321	38.941	37.232	34.355	1.00	33.92	N
ATOM	2468	CA	ASN A 321	40.143	36.978	35.085	1.00	34.08	C
ATOM	2469	C	ASN A 321	40.486	38.141	36.018	1.00	34.26	C
ATOM	2470	O	ASN A 321	40.874	37.919	37.164	1.00	34.14	O
ATOM	2471	CB	ASN A 321	41.271	36.616	34.119	1.00	34.30	C
ATOM	2472	CG	ASN A 321	41.195	35.161	33.663	1.00	34.44	C
ATOM	2473	OD1	ASN A 321	40.829	34.273	34.434	1.00	34.16	O
ATOM	2474	ND2	ASN A 321	41.522	34.918	32.402	1.00	35.05	N
ATOM	2475	N	ILE A 322	40.318	39.379	35.569	1.00	34.24	N
ATOM	2476	CA	ILE A 322	40.634	40.488	36.448	1.00	34.25	C
ATOM	2477	C	ILE A 322	39.781	40.408	37.701	1.00	33.85	C
ATOM	2478	O	ILE A 322	40.250	40.711	38.789	1.00	34.16	O
ATOM	2479	CB	ILE A 322	40.412	41.837	35.760	1.00	34.70	C
ATOM	2480	CG1	ILE A 322	41.338	41.993	34.558	1.00	35.34	C
ATOM	2481	CG2	ILE A 322	40.651	43.007	36.748	1.00	35.37	C
ATOM	2482	CD1	ILE A 322	42.778	41.928	34.895	1.00	36.17	C
ATOM	2483	N	GLU A 323	38.525	40.013	37.558	1.00	33.42	N
ATOM	2484	CA	GLU A 323	37.636	39.935	38.704	1.00	32.97	C
ATOM	2485	C	GLU A 323	38.085	38.842	39.652	1.00	33.11	C
ATOM·	2486	O	GLU A 323	38.067	39.001	40.864	1.00	32.66	O
ATOM	2487	CB	GLU A 323	36.199	39.673	38.256	1.00	32.73	C
ATOM	2488	CG	GLU A 323	35.543	40.907	37.672	1.00	33.02	C
ATOM	2489	CD	GLU A 323	34.166	40.693	37.057	1.00	32.91	C
ATOM	2490	OE1	GLU A 323	33.193	40.309	37.740	1.00	31.94	O
ATOM	2491	OE2	GLU A 323	34.048	40.961	35.856	1.00	33.81	O
ATOM	2492	N	LYS A 324	38.497	37.720	39.088	1.00	33.56	N
ATOM	2493	CA	LYS A 324	38.882	36.588	39.895	1.00	33.72	C
ATOM	2494	C	LYS A 324	40.138	36.937	40.670	1.00	34.09	C
ATOM	2495	O	LYS A 324	40.228	36.664	41.859	1.00	34.15	O
ATOM	2496	CB	LYS A 324	39.119	35.368	39.012	1.00	33.73	C
ATOM	2497	CG	LYS A 324	37.877	34.766	38.353	1.00	33.83	C
ATOM	2498	CD	LYS A 324	38.355	33.673	37.440	1.00	33.70	C
ATOM	2499	CE	LYS A 324	37.294	32.883	36.723	1.00	33.57	C
ATOM	2500	NZ	LYS A 324	37.993	31.761	35.984	1.00	32.76	N
ATOM	2501	N	MET A 325	41.098	37.558	39.995	1.00	34.73	N
ATOM	2502	CA	MET A 325	42.380	37.915	40.609	1.00	35.32	C
ATOM	2503	C	MET A 325	42.248	38.883	41.766	1.00	35.06	C
ATOM	2504	O	MET A 325	42.888	38.729	42.808	1.00	34.50	O
ATOM	2505	CB	MET A 325	43.328	38.501	39.563	1.00	35.57	C
ATOM	2506	CG	MET A 325	43.962	37.419	38.724	1.00	36.96	C
ATOM	2507	SD	MET A 325	44.984	37.973	37.360	1.00	40.43	S
ATOM	2508	CE ·	MET A 325	45.710	39.363	38.037	1.00	41.05	C
ATOM	2509	N	LEU A 326	41.427	39.891	41.555	1.00	35.32	N
ATOM	2510	CA	LEU A 326	41.178	40.895	42.570	1.00	35.83	C
ATOM	2511	C	LEU A 326	40.556	40.230	43.770	1.00	35.60	C

ATOM	2512	O	LEU	A	326	40.914	40.507	44.910	1.00	35.34	O
ATOM	2513	CB	LEU	A	326	40.216	41.929	42.026	1.00	36.07	C
ATOM	2514	CG	LEU	A	326	40.721	43.321	41.689	1.00	37.48	C
ATOM	2515	CD1	LEU	A	326	42.221	43.442	41.537	1.00	38.59	C
ATOM	2516	CD2	LEU	A	326	40.049	43.692	40.413	1.00	38.65	C
ATOM	2517	N	GLY	A	327	39.613	39.341	43.493	1.00	35.59	N
ATOM	2518	CA	GLY	A	327	38.947	38.604	44.538	1.00	35.54	C
ATOM	2519	C	GLY	A	327	39.983	37.998	45.443	1.00	35.62	C
ATOM	2520	O	GLY	A	327	40.023	38.258	46.641	1.00	35.52	O
ATOM	2521	N	GLU	A	328	40.863	37.209	44.851	1.00	35.84	N
ATOM	2522	CA	GLU	A	328	41.831	36.486	45.632	1.00	35.91	C
ATOM	2523	C	GLU	A	328	42.783	37.424	46.298	1.00	35.44	C
ATOM	2524	O	GLU	A	328	43.086	37.272	47.465	1.00	35.60	O
ATOM	2525	CB	GLU	A	328	42.584	35.513	44.750	1.00	36.21	C
ATOM	2526	CG	GLU	A	328	41.675	34.419	44.226	1.00	38.20	C
ATOM	2527	CD	GLU	A	328	41.854	33.088	44.941	1.00	41.33	C
ATOM	2528	OE1	GLU	A	328	42.244	33.084	46.138	1.00	42.40	O
ATOM	2529	OE2	GLU	A	328	41.608	32.034	44.292	1.00	43.59	O
ATOM	2530	N	ALA	A	329	43.220	38.435	45.577	1.00	35.11	N
ATOM	2531	CA	ALA	A	329	44.259	39.282	46.110	1.00	34.85	C
ATOM	2532	C	ALA	A	329	43.790	40.103	47.296	1.00	34.75	C
ATOM	2533	O	ALA	A	329	44.533	40.282	48.258	1.00	34.53	O
ATOM	2534	CB	ALA	A	329	44.778	40.163	45.046	1.00	34.85	C
ATOM	2535	N	LEU	A	330	42.567	40.613	47.214	1.00	34.62	N
ATOM	2536	CA	LEU	A	330	41.996	41.399	48.291	1.00	34.55	C
ATOM	2537	C	LEU	A	330	41.478	40.555	49.448	1.00	34.90	C
ATOM	2538	O	LEU	A	330	41.234	41.072	50.532	1.00	35.33	O
ATOM	2539	CB	LEU	A	330	40.851	42.245	47.766	1.00	34.31	C
ATOM	2540	CG	LEU	A	330	41.202	43.322	46.743	1.00	34.06	C
ATOM	2541	CD1	LEU	A	330	39.942	43.965	46.258	1.00	34.23	C
ATOM	2542	CD2	LEU	A	330	42.078	44.382	47.285	1.00	34.05	C
ATOM	2543	N	GLY	A	331	41.295	39.262	49.232	1.00	35.23	N
ATOM	2544	CA	GLY	A	331	40.794	38.401	50.285	1.00	35.49	C
ATOM	2545	C	GLY	A	331	39.306	38.471	50.584	1.00	35.66	C
ATOM	2546	O	GLY	A	331	38.849	37.859	51.544	1.00	35.61	O
ATOM	2547	N	ASN	A	332	38.547	39.213	49.790	1.00	36.04	N
ATOM	2548	CA	ASN	A	332	37.113	39.295	49.992	1.00	36.44	C
ATOM	2549	C	ASN	A	332	36.483	39.791	48.732	1.00	36.55	C
ATOM	2550	O	ASN	A	332	36.647	40.951	48.381	1.00	37.01	O
ATOM	2551	CB	ASN	A	332	36.775	40.275	51.094	1.00	36.54	C
ATOM	2552	CG	ASN	A	332	35.311	40.260	51.440	1.00	37.47	C
ATOM	2553	OD1	ASN	A	332	34.519	39.541	50.828	1.00	37.83	O
ATOM	2554	ND2	ASN	A	332	34.938	41.043	52.444	1.00	39.90	N
ATOM	2555	N	PRO	A	333	35.699	38.957	48.078	1.00	36.46	N
ATOM	2556	CA	PRO	A	333	35.178	39.338	46.775	1.00	36.43	C
ATOM	2557	C	PRO	A	333	34.368	40.590	46.908	1.00	36.32	C
ATOM	2558	O	PRO	A	333	34.318	41.384	45.988	1.00	36.36	O
ATOM	2559	CB	PRO	A	333	34.278	38.170	46.366	1.00	36.50	C
ATOM	2560	CG	PRO	A	333	34.247	37.229	47.489	1.00	36.58	C
ATOM	2561	CD	PRO	A	333	35.180	37.668	48.548	1.00	36.54	C
ATOM	2562	N	GLN	A	334	33.743	40.800	48.047	1.00	36.44	N
ATOM	2563	CA	GLN	A	334	32.906	41.969	48.130	1.00	36.85	C
ATOM	2564	C	GLN	A	334	33.748	43.222	48.057	1.00	36.57	C
ATOM	2565	O	GLN	A	334	33.218	44.304	47.868	1.00	36.98	O
ATOM	2566	CB	GLN	A	334	31.987	41.940	49.348	1.00	37.31	C
ATOM	2567	CG	GLN	A	334	30.685	41.151	49.026	1.00	38.95	C
ATOM	2568	CD	GLN	A	334	29.669	41.097	50.171	1.00	40.33	C
ATOM	2569	OE1	GLN	A	334	29.751	41.872	51.137	1.00	41.70	O
ATOM	2570	NE2	GLN	A	334	28.712	40.178	50.061	1.00	39.80	N
ATOM	2571	N	GLU	A	335	35.064	43.088	48.159	1.00	35.99	N
ATOM	2572	CA	GLU	A	335	35.914	44.261	48.067	1.00	35.53	C

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ATOM   2573  C    GLU A 335      36.229  44.610  46.621  1.00 34.53           C
ATOM   2574  O    GLU A 335      36.715  45.689  46.338  1.00 34.20           O
ATOM   2575  CB   GLU A 335      37.201  44.083  48.894  1.00 35.99           C
ATOM   2576  CG   GLU A 335      37.054  44.507  50.354  1.00 37.38           C
ATOM   2577  CD   GLU A 335      38.382  44.592  51.076  1.00 40.16           C
ATOM   2578  OE1  GLU A 335      39.271  45.318  50.570  1.00 42.04           O
ATOM   2579  OE2  GLU A 335      38.535  43.952  52.153  1.00 41.52           O
ATOM   2580  N    VAL A 336      35.922  43.701  45.706  1.00 33.97           N
ATOM   2581  CA   VAL A 336      36.165  43.901  44.276  1.00 33.49           C
ATOM   2582  C    VAL A 336      35.537  45.159  43.670  1.00 33.00           C
ATOM   2583  O    VAL A 336      36.194  45.904  42.946  1.00 33.01           O
ATOM   2584  CB   VAL A 336      35.696  42.678  43.473  1.00 33.36           C
ATOM   2585  CG1  VAL A 336      35.726  42.951  41.992  1.00 34.05           C
ATOM   2586  CG2  VAL A 336      36.582  41.509  43.755  1.00 33.01           C
ATOM   2587  N    GLY A 337      34.270  45.406  43.926  1.00 32.41           N
ATOM   2588  CA   GLY A 337      33.675  46.592  43.351  1.00 32.21           C
ATOM   2589  C    GLY A 337      34.332  47.903  43.724  1.00 31.72           C
ATOM   2590  O    GLY A 337      34.682  48.711  42.859  1.00 31.40           O
ATOM   2591  N    PRO A 338      34.433  48.163  45.013  1.00 31.50           N
ATOM   2592  CA   PRO A 338      35.025  49.415  45.470  1.00 31.47           C
ATOM   2593  C    PRO A 338      36.387. 49.648  44.846  1.00 31.60           C
ATOM   2594  O    PRO A 338      36.655  50.756  44.386  1.00 31.51           O
ATOM   2595  CB   PRO A 338      35.065  49.230  46.977  1.00 31.27           C
ATOM   2596  CG   PRO A 338      33.883  48.376  47.218  1.00 31.08           C
ATOM   2597  CD   PRO A 338      33.933  47.359  46.137  1.00 31.28           C
ATOM   2598  N    LEU A 339      37.219  48.620  44.765  1.00 31.80           N
ATOM   2599  CA   LEU A 339      38.531  48.825  44.182  1.00 32.25           C
ATOM   2600  C    LEU A 339      38.431  49.269  42.740  1.00 32.12           C
ATOM   2601  O    LEU A 339      39.130  50.188  42.320  1.00 32.25           O
ATOM   2602  CB   LEU A 339      39.395  47.581  44.278  1.00 32.49           C
ATOM   2603  CG   LEU A 339      40.853  47.920  43.962  1.00 33.78           C
ATOM   2604  CD1  LEU A 339      41.793  47.121  44.797  1.00 34.64           C
ATOM   2605  CD2  LEU A 339      41.146  47.681  42.516  1.00 34.50           C
ATOM   2606  N    LEU A 340      37.567  48.607  41.978  1.00 32.12           N
ATOM   2607  CA   LEU A 340      37.385  48.963  40.584  1.00 31.85           C
ATOM   2608  C    LEU A 340      36.854  50.376  40.483  1.00 31.56           C
ATOM   2609  O    LEU A 340      37.342  51.169  39.701  1.00 31.42           O
ATOM   2610  CB   LEU A 340      36.468  47.975  39.888  1.00 31.90           C
ATOM   2611  CG   LEU A 340      37.089  46.598  39.669  1.00 32.44           C
ATOM   2612  CD1  LEU A 340      36.028  45.636  39.132  1.00 33.11           C
ATOM   2613  CD2  LEU A 340      38.281  46.660  38.728  1.00 31.95           C
ATOM   2614  N    ASN A 341      35.865  50.717  41.282  1.00 31.61           N
ATOM   2615  CA   ASN A 341      35.384  52.083  41.231  1.00 31.82           C
ATOM   2616  C    ASN A 341      36.484  53.109  41.525  1.00 31.45           C
ATOM   2617  O    ASN A 341      36.600  54.119  40.845  1.00 30.80           O
ATOM   2618  CB   ASN A 341      34.212  52.260  42.177  1.00 31.97           C
ATOM   2619  CG   ASN A 341      32.901  51.883  41.532  1.00 32.77           C
ATOM   2620  OD1  ASN A 341      32.426  52.568  40.614  1.00 34.75           O
ATOM   2621  ND2  ASN A 341      32.310  50.789  41.992  1.00 31.86           N
ATOM   2622  N    THR A 342      37.301  52.835  42.530  1.00 31.40           N
ATOM   2623  CA   THR A 342      38.380  53.739  42.880  1.00 31.27           C
ATOM   2624  C    THR A 342      39.317  53.842  41.707  1.00 31.14           C
ATOM   2625  O    THR A 342      39.837  54.908  41.402  1.00 30.66           O
ATOM   2626  CB   THR A 342      39.146  53.217  44.097  1.00 31.43           C
ATOM   2627  OG1  THR A 342      38.448  53.565  45.299  1.00 30.95           O
ATOM   2628  CG2  THR A 342      40.500  53.913  44.228  1.00 31.17           C
ATOM   2629  N    MET A 343      39.549  52.714  41.059  1.00 31.29           N
ATOM   2630  CA   MET A 343      40.406  52.703  39.898  1.00 31.59           C
ATOM   2631  C    MET A 343      39.970  53.639  38.785  1.00 31.49           C
ATOM   2632  O    MET A 343      40.804  54.361  38.255  1.00 31.46           O
ATOM   2633  CB   MET A 343      40.516  51.310  39.314  1.00 31.79           C
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ATOM	2634	CG	MET	A	343	41.831	50.662	39.629	1.00	32.65	C
ATOM	2635	SD	MET	A	343	42.271	49.379	38.468	1.00	33.09	S
ATOM	2636	CE	MET	A	343	41.116	48.304	38.916	1.00	34.22	C
ATOM	2637	N	ILE	A	344	38.690	53.641	38.418	1.00	31.31	N
ATOM	2638	CA	ILE	A	344	38.293	54.432	37.265	1.00	31.42	C
ATOM	2639	C	ILE	A	344	37.708	55.787	37.533	1.00	31.14	C
ATOM	2640	O	ILE	A	344	37.752	56.630	36.640	1.00	31.01	O
ATOM	2641	CB	ILE	A	344	37.272	53.708	36.362	1.00	31.86	C
ATOM	2642	CG1	ILE	A	344	35.870	53.866	36.928	1.00	33.16	C
ATOM	2643	CG2	ILE	A	344	37.633	52.229	36.118	1.00	32.09	C
ATOM	2644	CD1	ILE	A	344	34.876	53.232	36.072	1.00	35.18	C
ATOM	2645	N	LYS	A	345	37.131	56.050	38.698	1.00	30.88	N
ATOM	2646	CA	LYS	A	345	36.455	57.334	38.758	1.00	30.94	C
ATOM	2647	C	LYS	A	345	37.412	58.468	38.853	1.00	30.72	C
ATOM	2648	O	LYS	A	345	38.250	58.558	39.743	1.00	30.61	O
ATOM	2649	CB	LYS	A	345	35.315	57.475	39.765	1.00	31.14	C
ATOM	2650	CG	LYS	A	345	35.361	56.680	40.977	1.00	32.16	C
ATOM	2651	CD	LYS	A	345	33.970	56.273	41.340	1.00	33.62	C
ATOM	2652	CE	LYS	A	345	33.514	56.873	42.665	1.00	34.71	C
ATOM	2653	NZ	LYS	A	345	34.302	56.317	43.840	1.00	36.28	N
ATOM	2654	N	GLY	A	346	37.280	59.332	37.870	1.00	30.83	N
ATOM	2655	CA	GLY	A	346	38.114	60.504	37.789	1.00	30.66	C
ATOM	2656	C	GLY	A	346	39.345	60.195	37.001	1.00	30.25	C
ATOM	2657	O	GLY	A	346	40.147	61.066	36.745	1.00	30.00	O
ATOM	2658	N	ARG	A	347	39.454	58.953	36.564	1.00	30.42	N
ATOM	2659	CA	ARG	A	347	40.652	58.496	35.923	1.00	30.66	C
ATOM	2660	C	ARG	A	347	40.389	57.879	34.566	1.00	30.89	C
ATOM	2661	O	ARG	A	347	41.033	58.241	33.588	1.00	30.30	O
ATOM	2662	CB	ARG	A	347	41.350	57.526	36.860	1.00	30.88	C
ATOM	2663	CG	ARG	A	347	41.786	58.177	38.171	1.00	30.97	C
ATOM	2664	CD	ARG	A	347	43.129	57.701	38.636	1.00	31.35	C
ATOM	2665	NE	ARG	A	347	43.128	56.255	38.597	1.00	30.88	N
ATOM	2666	CZ	ARG	A	347	44.088	55.482	38.128	1.00	29.55	C
ATOM	2667	NH1	ARG	A	347	45.237	55.962	37.667	1.00	28.44	N
ATOM	2668	NH2	ARG	A	347	43.876	54.181	38.147	1.00	29.95	N
ATOM	2669	N	TYR	A	348	39.446	56.953	34.480	1.00	31.67	N
ATOM	2670	CA	TYR	A	348	39.143	56.377	33.176	1.00	32.27	C
ATOM	2671	C	TYR	A	348	37.726	56.574	32.689	1.00	33.10	C
ATOM	2672	O	TYR	A	348	37.425	56.212	31.557	1.00	33.12	O
ATOM	2673	CB	TYR	A	348	39.422	54.896	33.154	1.00	31.96	C
ATOM	2674	CG	TYR	A	348	40.860	54.527	33.253	1.00	32.06	C
ATOM	2675	CD1	TYR	A	348	41.652	54.424	32.114	1.00	31.60	C
ATOM	2676	CD2	TYR	A	348	41.435	54.256	34.483	1.00	31.75	C
ATOM	2677	CE1	TYR	A	348	42.980	54.061	32.203	1.00	31.08	C
ATOM	2678	CE2	TYR	A	348	42.761	53.897	34.580	1.00	32.11	C
ATOM	2679	CZ	TYR	A	348	43.530	53.800	33.438	1.00	31.05	C
ATOM	2680	OH	TYR	A	348	44.845	53.427	33.544	1.00	29.83	O
ATOM	2681	N	ASN	A	349	36.850	57.137	33.507	1.00	34.48	N
ATOM	2682	CA	ASN	A	349	35.465	57.275	33.083	1.00	35.73	C
ATOM	2683	C	ASN	A	349	35.037	58.643	32.595	1.00	36.60	C
ATOM	2684	O	ASN	A	349	35.757	59.640	32.508	1.00	37.31	O
ATOM	2685	CB	ASN	A	349	34.542	56.900	34.212	1.00	35.62	C
ATOM	2686	CG	ASN	A	349	34.635	57.864	35.353	1.00	37.08	C
ATOM	2687	OD1	ASN	A	349	35.398	58.840	35.308	1.00	36.55	O
ATOM	2688	ND2	ASN	A	349	33.861	57.604	36.403	1.00	39.78	N
ATOM	2689	OXT	ASN	A	349	33.861	58.757	32.276	1.00	38.11	O
TER	2690		ASN	A	349						
HETATM	2691	FE	FE2	A	1350	23.364	27.586	28.889	1.00	32.45	FE
HETATM	2692	C1	AKG	A	1351	22.523	25.412	27.792	1.00	37.04	C
HETATM	2693	O1	AKG	A	1351	23.535	26.092	27.914	1.00	39.03	O
HETATM	2694	O2	AKG	A	1351	22.557	24.216	27.226	1.00	37.33	O

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HETATM 2695  C2   AKG A1351      21.186  25.964  28.297  1.00 35.25       C
HETATM 2696  O5   AKG A1351      21.175  27.063  28.807  1.00 33.44       O
HETATM 2697  C3   AKG A1351      19.937  25.139  28.167  1.00 36.11       C
HETATM 2698  C4   AKG A1351      18.848  25.738  29.055  1.00 36.50       C
HETATM 2699  C5   AKG A1351      17.464  25.331  28.632  1.00 35.97       C
HETATM 2700  O3   AKG A1351      17.276  24.627  27.656  1.00 36.64       O
HETATM 2701  O4   AKG A1351      16.432  25.771  29.338  1.00 36.31       O
HETATM 2702  S    SO4 A1352       0.300  25.196  43.477  1.00 80.75       S
HETATM 2703  O1   SO4 A1352       1.094  26.117  44.306  1.00 78.50       O
HETATM 2704  O2   SO4 A1352       1.221  24.413  42.644  1.00 78.51       O
HETATM 2705  O3   SO4 A1352      -0.470  24.282  44.334  1.00 79.54       O
HETATM 2706  O4   SO4 A1352      -0.640  25.951  42.633  1.00 78.07       O
HETATM 2707  S    SO4 A1353       1.825  28.603  29.515  1.00 77.38       S
HETATM 2708  O1   SO4 A1353       3.041  29.212  30.061  1.00 76.05       O
HETATM 2709  O2   SO4 A1353       2.144  27.528  28.574  1.00 75.24       O
HETATM 2710  O3   SO4 A1353       1.090  28.086  30.675  1.00 76.52       O
HETATM 2711  O4   SO4 A1353       1.011  29.586  28.783  1.00 76.04       O
HETATM 2712  S    SO4 A1354      34.403  30.284  38.043  1.00 78.17       S
HETATM 2713  O1   SO4 A1354.     34.921  31.567  38.516  1.00 75.93       O
HETATM 2714  O2   SO4 A1354      35.240  29.158  38.450  1.00 77.42       O
HETATM 2715  O3   SO4 A1354      33.112  30.084  38.686  1.00 75.59       O
HETATM 2716  O4   SO4 A1354      34.303  30.307  36.581  1.00 74.60       O
HETATM 2717  O    HOH Z    1     25.824  26.442  26.175  1.00 46.43       O
HETATM 2718  O    HOH Z    2     27.811  27.709  24.637  1.00 41.32       O
HETATM 2719  O    HOH Z    3     27.367  30.233  25.742  1.00 38.18       O
CONECT 1478 2691
CONECT 1498 2691
CONECT 2167 2691
CONECT 2691 2696 2693 1478 2167 1498
CONECT 2692 2693 2694 2695
CONECT 2693 2692 2691
CONECT 2694 2692
CONECT 2695 2692 2696 2697
CONECT 2696 2691 2695
CONECT 2697 2695 2698
CONECT 2698 2697 2699
CONECT 2699 2698 2700 2701
CONECT 2700 2699
CONECT 2701 2699
CONECT 2702 2703 2704 2705 2706
CONECT 2703 2702
CONECT 2704 2702
CONECT 2705 2702
CONECT 2706 2702
CONECT 2707 2708 2709 2710 2711
CONECT 2708 2707
CONECT 2709 2707
CONECT 2710 2707
CONECT 2711 2707
CONECT 2712 2713 2714 2715 2716
CONECT 2713 2712
CONECT 2714 2712
CONECT 2715 2712
CONECT 2716 2712
MASTER      433    0    5   14   20    0    9    6 2718    1   29   27
END
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CLAIMS

1.   A method of identifying, screening, characterising or designing a ·
chemical entity which mimics or binds to FIH, which method comprises comparing a
5   structural model of FIH with a structural model for said chemical entity, wherein said
structural model of FIH is derived from structural factors or structural coordinates
determined by subjecting to X-ray diffraction measurements a crystal comprising
FIH.

2.   Use of the structural co-ordinates obtainable by subjecting a crystal
10   comprising FIH to X-ray diffraction measurements and deducing the structural co-
ordinates from the diffraction measurements, to identify, screen, characterise, design
or modify a chemical entity.

3.   A method or use according to claim 1 or 2 in which the structural
coordinates are those shown in Table 3. ·

15   4.   A method or use according to any one of the preceding claims,
wherein said chemical entity binds to FIH.

5.   A method or use according to any one of the preceding claims,
wherein said chemical entity is selected to inhibit the asparaginyl hydroxylase
activity of FIH.

20   6.   A method or use according to any one of the preceding claims further
comprising contacting said chemical entity with HIF or a fragment thereof or a
homologue of either thereof incorporating asparagine 803 with FIH or a homologue
thereof which maintains the asparaginyl hydroxylase activity of FIH and monitoring
for hydroxylation of asparagine 803.

25   7.   A chemical entity identified by a method for use according to any one
of the preceding claims, wherein said chemical entity inhibits the asparaginyl
hydroxylase activity of FIH.

8.   A chemical entity according to claim 7 wherein said chemical entity
inhibits hydroxylation of the asparagine position 803 of HIF by FIH.

30   9.   A chemical entity according to claim 7 wherein said chemical entity
inhibits dimerisation of FIH.

10. A chemical entity according to claim 9 wherein said chemical entity binds to residues that form the dimerisation interface of FIH, selected from residues 330 to 346 of FIH.

11. A chemical entity according to claim 7 wherein said chemical entity binds to iron, or prevents Fe(II) binding to FIH.

12. A chemical entity according to claim 7 wherein said chemical entity disrupts 2-oxoglutarate binding to FIH.

13. A chemical entity according to claim 12 wherein said chemical entity interferes with the interactions at residues 214, 196 and 145 of FIH, or which interrupts the interactions of 2OG with residues 281, 186, 188, 207 or 196 of FIH.

14. A chemical entity according to claim 7 wherein said chemical entity interrupts binding of FIH for Asn 803 of HIF, preferably, by interfering with binding of HIF at residues 102, 239 or 238 of HIF.

15. A chemical entity according to claim 7 which interferes with Site 1 binding of CAD of HIF to FIH and which exploits electrostatic, hydrogen binding and/or hydrophobic interactions with one or more residues selected from 102, 104, 106, 201, 202, 147, 239, 299-303, 313, 317, 318, 321, 324, 238, 296 or 321 to 324 of FIH.

16. A chemical entity according to claim 14 wherein said chemical entity interferes with binding of CAD of HIF to FIH at Site 2, and exploits electrostatic, hydrogen binding and/or hydrophobic interactions with residues 149, 150, 151, 152, 159, 162, 163, 167, 181, 182 ,183, 184 or 185.

17. A chemical entity according any of one of claims 7 to 16 for use in a method of treatment.

18. A chemical entity according to claim 17 for use in the treatment of ischaemia and/or to promote antiogenesis.
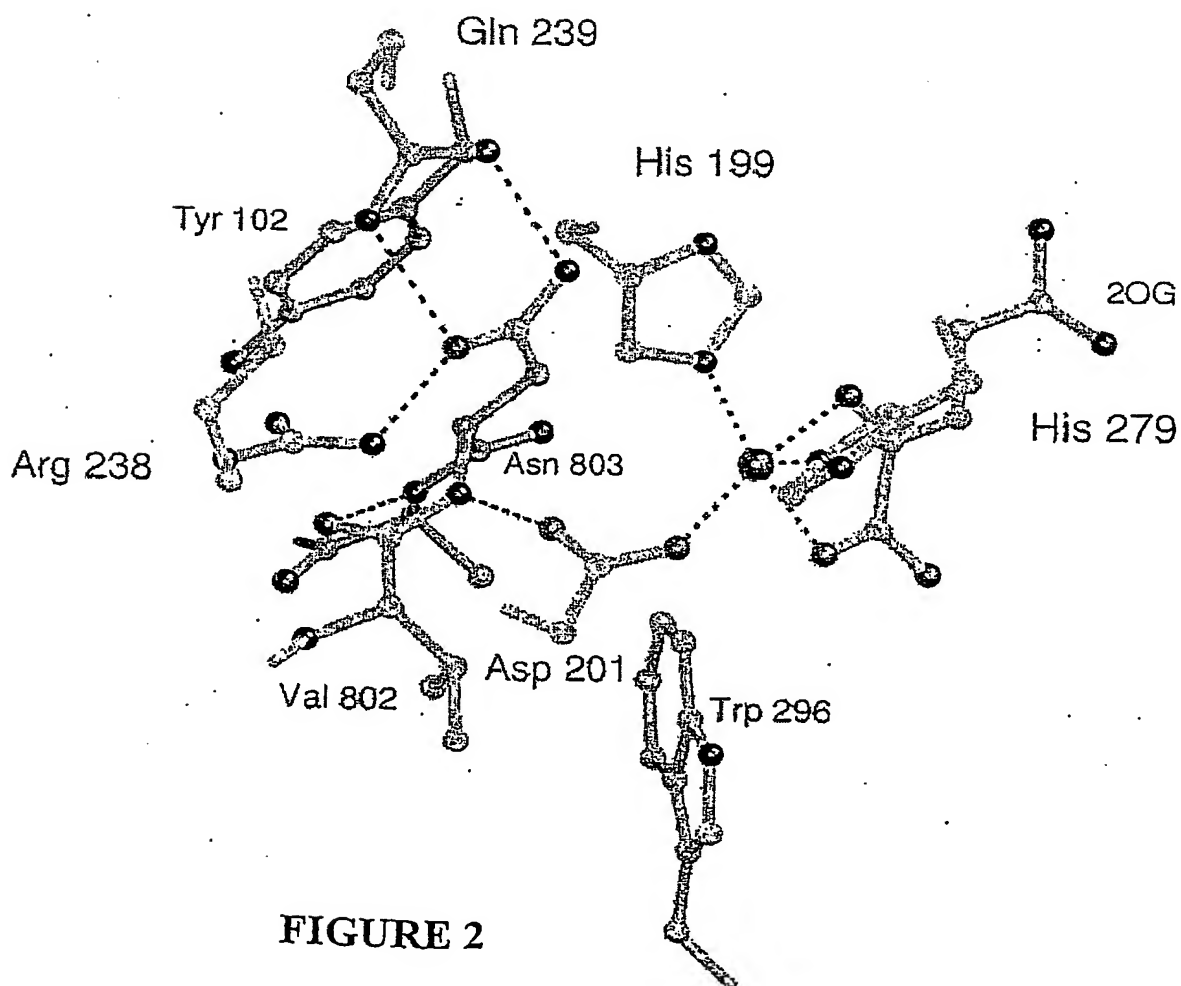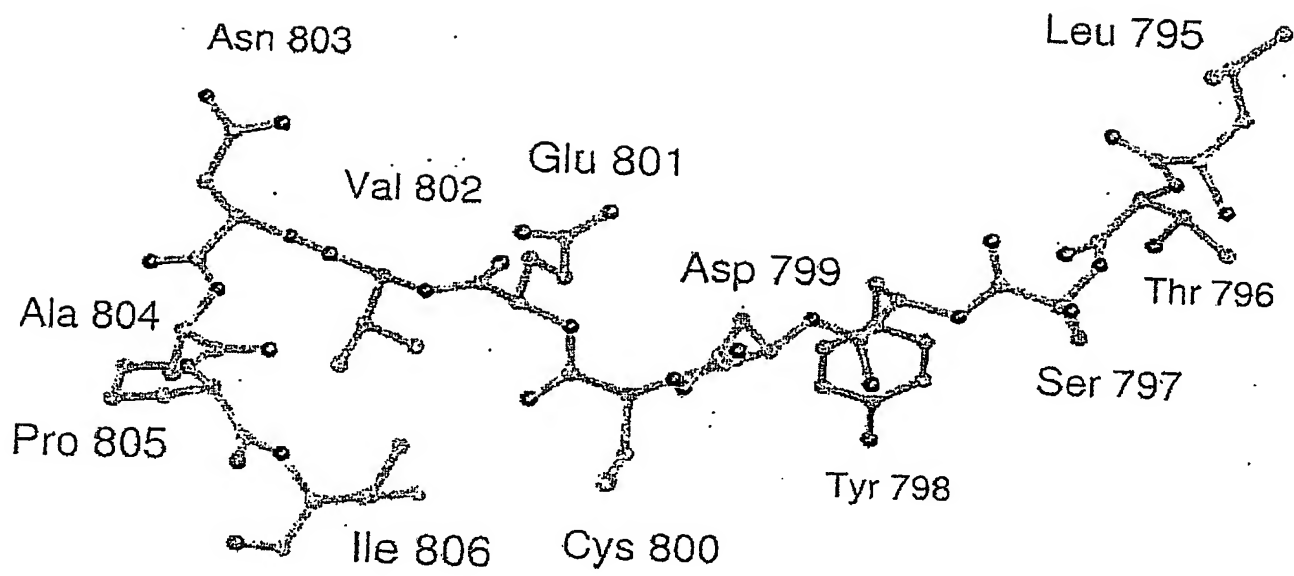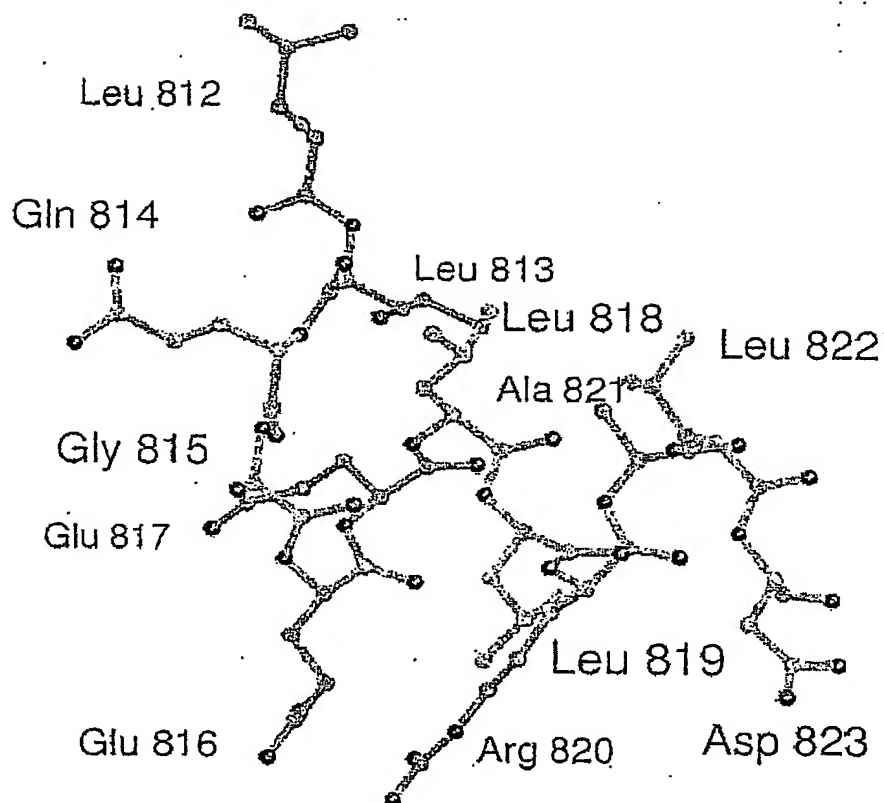
FIGURE 1

FIGURE 2

Asn 803
Val 802
Glu 801
Leu 795
Ala 804
Asp 799
Thr 796
Pro 805
Ser 797
Tyr 798
Ile 806
Cys 800

FIGURE 3

Leu 812
Gln 814
Leu 813
Leu 818
Leu 822
Ala 821
Gly 815
Glu 817
Leu 819
Glu 816
Arg 820
Asp 823

FIGURE 4